

Issued Every Month

For Free Distribution to Users  
of Machine Tools

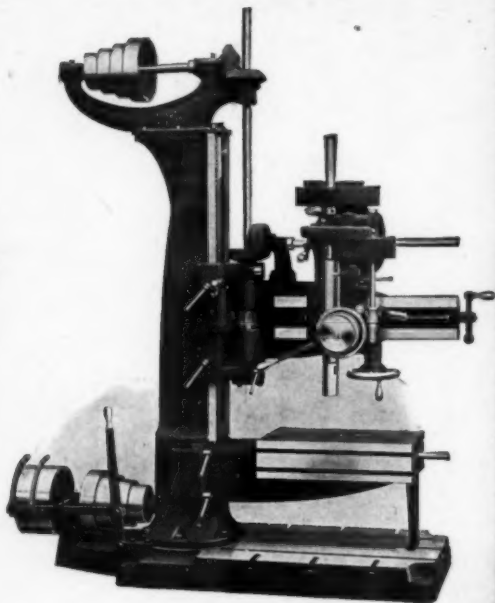
**HITCHCOCK'S  
MACHINE  
TOOL LIST**

A Reference Book for Buyers  
of Iron Working Machinery

Published by  
**A. H. HITCHCOCK**  
1220-1235 Caxton Building  
Chicago

# FOSDICK

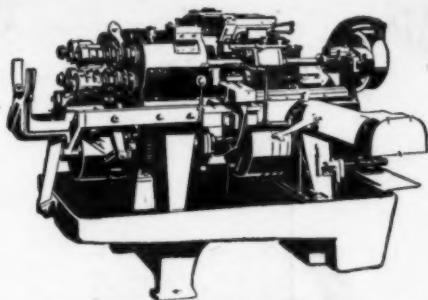
**2½ Ft. Radial Drill**



## **Why Pay**

for a tapping attachment on a Radial Drill when you have no use for same? Liberal reduction is allowed for tapping attachment when not desired. Write for full description and prices. They will interest you.

**The Fosdick Machine Tool Co.**  
**Cincinnati, Ohio**



*Acme Automatic Multiple Spindle Screw Machine*

## **Threads Cut Clean**

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Threads will stand the most strain if accurately cut, and that's up to the method employed.

When threads are being cut on the Acme Automatic the stock spindle is stopped and the die runs on. Just the proper cutting speed in relation to the size and pitch of the thread, no push on or pull off, means good threads.

It is this kind of threads that hold your machines rigid and make them long lived. Threads will be cleaner and more accurate if cut the "Acme Way." Ask to see samples of actual work done on Acmes.

*Our booklet "200 Reasons" shows over 100 different Acme threading operations. Write for it.*

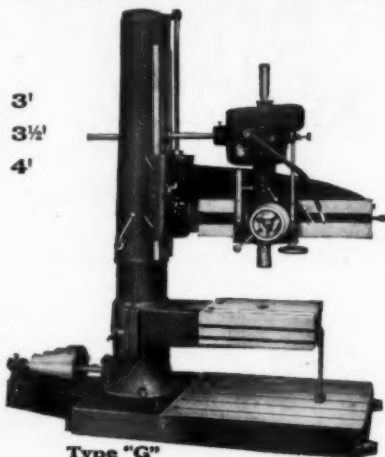
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**THE NATIONAL-ACME  
MANUFACTURING CO.**  
**SIXTH CLEVELAND CITY**

New York Chicago Boston Detroit Atlanta Montreal  
Gen. Foreign Rep.: A. H. Schutte, Schuchardt and Schutte

# Many Points of Excellence

Make the Gang Improved Radial Driller and  
Tapper first choice of hard-headed manufacturers



**Type "G"**

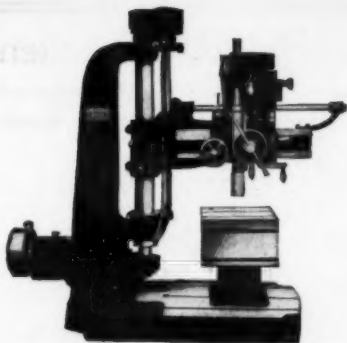
**THEY WANT** a big result-producer, and they get it in the Gang. Not a detail neglected that would increase capacity, convenience, or lessen labor costs.

They like the single lever spindle control, the improved spindle drive, four rates of feed for each drilling speed—12 spindle speeds when furnished with speed box—the depth gage and automatic stop, the built-in design for protecting gears, the powerful friction clutches, and they like it because it handles very heavy tapping. There's a choice of seven kinds of tables.

*Send today for folder of this top-notch*

**The William E. Gang Co.**  
CINCINNATI, OHIO





## The "Morris" Plain Radial Drill

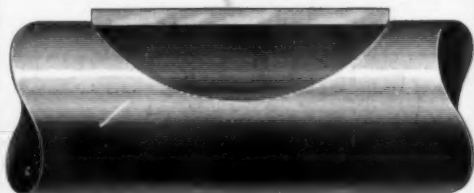
Solve your drilling problems by installing a MORRIS PLAIN RADIAL DRILL. A rigid, well constructed, simple and accurate machine, always ready for good service; no complicated parts to get out of order; a substantial, dependable machine throughout; power feeds, quick action. This is a tool that finishes the job in a thorough, workmanlike manner.

An economical tool to operate and priced at fair and reasonable figures. Made with cone drive, speed box drive or motor drive. Better write for descriptive matter. It is worth having for reference. And let us quote on your next requirements.

**The John B. Morris Machine Tool Co.**  
**Cincinnati, Ohio**

Makers also of SUPERIOR MORRIS Engine Lathes

# **"Whitney" Keys and Cutters** **For** **"The Woodruff System of Keying"**



**No. 16 CUTTER FULL SIZE**

"Whitney" Keys are made in 114 different sizes and in three grades as follows:

***Regular Carbon Steel Keys***

***Regular Carbon Steel Keys Case Hardened***

***Nickel Steel Keys Heat Treated***

"Whitney" Cutters are furnished in both Carbon Steel and High Speed Steel, so no matter what your requirements, you will find in our line exactly the Key and Cutter to meet your particular conditions.

***Catalog No. 10 Gives Full Particulars***

**The Whitney Manufacturing Co.,**  
**Hartford, Conn.**

Manufacturers of Hand Millers High Grade Driving Chains, Water  
Tool Grinders, "The Woodruff System of Keying" Presto  
Chucks and Friction Tapping Devices

**You Pay Less Money For Drilling  
Small Holes In Large Work  
That Is Real Economy**



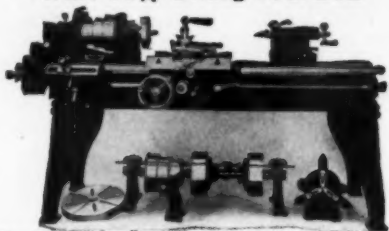
**The T. & F. 3-ft. Sensitive Radial**

drills holes up to  $\frac{3}{8}$ -inch in large work with the same speed and efficiency that you get on small work with the ordinary sensitive machine. It is flexible, quick-adjusting, easily handled. May be equipped with more than one head, each especially fitted for the work required, lever or automatic power feed, high speed sensitive or tapping heads, either singly or in combination. Manufacturers find this high speed, sensitive, radial drilling machine, owing to its wide range of availability, a practical time and money saver. It ought to be saving your money right now.

*You'll be interested in cost comparisons  
May we send them?*

**The Taylor & Fenn Company**  
Hartford, Conn.

## **The Handiest 14" B. G. Lathe** **With 15 $\frac{1}{4}$ " Swing over Bed**

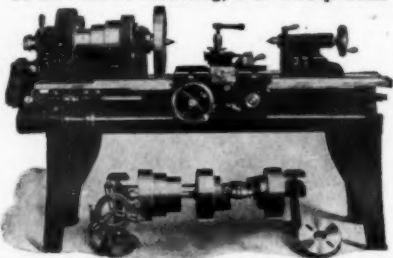


**The 32 changes of feed and threads**, controlled by one handle and knob, without removing a gear, is an improvement that adds to its convenience and capacity. The construction is strong and rigid, and every detail has been worked out with the greatest care. Guaranteed accurate to .001 of an inch.

*Write for description and moderate price for quality.*

**The Carroll & Jamieson Machine Tool Co., Batavia, O.**

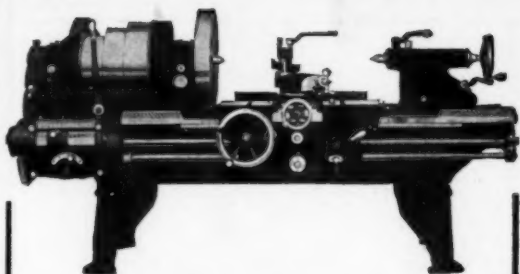
## **High Grade Engine Lathes** **15-in. with 17-in. Swing, 3 or 4 Step Cone**



Micrometer adjustments in both cross and compound feed, the scale reading from the front; a gear box and apron unexcelled for simplicity and strength; steel gears, cut from the solid; four quick-change feeds to each change of driving gear; and other practical features well worth investigation. **May we send you full description?**

**L. ROBBINS MACHINE CO.,**

**Worcester, Mass.**



**Semi-Steel Lathe Beds and our improved form of compensating vee are two distinct steps in advance of practice. The compensating vee resists the tool thrust in all directions and provides unusual rigidity.**

**The steel mixture reduces wear and depreciation.**

**The highest quality lathe work can only be done on a lathe of this character.**

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**The R. K. LeBlond M. T. Co.**  
**Cincinnati, Ohio**

# A Corner Stone of Factory Efficiency

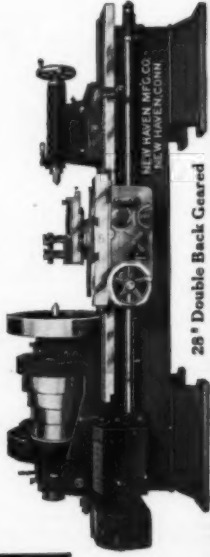
When You Place a "New Haven" in Your Manufacturing Structure You Build on a Safe Foundation—None Better or More Durable

Through a long series of years we have been adding one improvement after another—not because they looked pretty, but because they bettered the *service*. You should at least investigate our line of time-tried, service-proven high power modern lathes. Every one has behind it our successful experience of 60 years in the construction of high grade lathes, and is guaranteed in every sense of the word.

Made in  
18-in. to 65-in. Swing  
8-ft. to 36-ft. Bed

Let us have your name, saying you want  
further details of "New Havens"

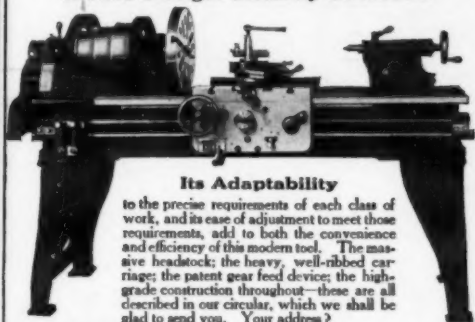
New Haven Mfg. Co.  
New Haven, Conn.



28" Double Back Geared

## A Superior 16-Inch Lathe

15 Feed Changes Instantly Obtainable



### Its Adaptability

to the precise requirements of each class of work, and its ease of adjustment to meet those requirements, add to both the convenience and efficiency of this modern tool. The massive headstock; the heavy, well-ribbed carriage; the patent gear feed device; the high-grade construction throughout—these are all described in our circular, which we shall be glad to send you. Your address?

**THE VON WYCK MACHINE TOOL CO., Cincinnati, O.**

## Automatic Gear Cutters

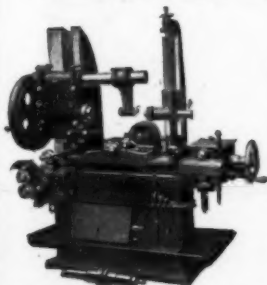
Construction Simple—Operation Positive

### Newark Gear Cutting Machines

are designed for the rapid production of accurate gears at lowest cost.

They have long cutter carriage with draw stroke, and accurate indexing mechanism with safety stop. Made in all sizes.

*Catalog gives details  
A postal request brings it*



**Newark Gear Cutting Machine Co.**

69 Prospect St., Newark, N. J.

## Don't Overlook the Merits of This Lathe



### 16-inch Lathe

Single or Double Back Geared Head Stock—Shifter lever in front for shifting back gears.

Long carriage bearing on bed, with carriage gibbed in front and back.

Compactly designed Quick Change Box, with all steel gears, and only two operating handles to make all changes.

*Circular fully describes and illustrates this lathe. Send for it today.*

**The Conover-Overkamp Machine & Tool Co.**

840 Germantown St., Dayton, Ohio, U. S. A.

## Tool Room and Manufacturing



### Strictly High Grade

### 15-Inch Lathe

### Accurate and Modern

No matter how exacting your requirements are, this up-to-date, sturdy, rigid tool will meet them all to your entire satisfaction. Carriage has wide bearing surface, gibbed front and back; headstock is heavy and well braced; tailstock is very rigid, and allows compound to swing 90 degrees.

*A satisfactory tool and so is the price. Write us today.*

**Rockford Tool Co.** Harrison Ave. & 11th St.  
Rockford, Ill.



**Why**

**Before Our Circulars were Printed  
When all we had sent Out were Photos**

**Have We Sold  
22**

**16" CISCO Lathes**

**Our only answer is that there is  
No Better Lathe Made  
Convince yourself by ordering one**

**Save money by the purchase of  
A Good Tool**

**The  
Cincinnati Iron & Steel Co.  
Cincinnati, U. S. A.**

***Builders of 14-16-18-in. Lathes***

## With This Automatic Saw Running At High Speed

you can cut your bars into  
**Duplicate Pieces**  
all alike in lengths desired  
without operator's attention.

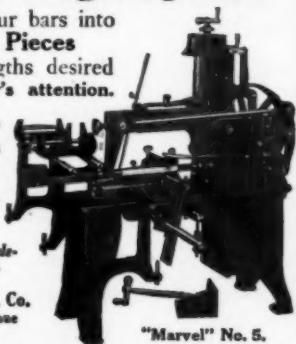
### It Feeds the Bar and Saves

labor, time, blades.

It's a modern  
money maker.

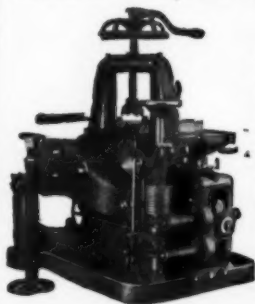
*Write us for complete de-  
scription and price.*

**Armstrong-Blum Mfg. Co.**  
341 N. Francisco Avenue  
Chicago, U. S. A.



"Marvel" No. 5.

## The Lea-Simplex



It has the cutting  
edge and the power  
behind it to cut the  
time and cost of cut-  
ting cold metal. It  
has greater capacity  
than any arbor driven  
machine of equal  
blade capacity.

*You will find it fully  
described in our catalogue*

**Write for it now**

**Lea Equipment Company**  
4900 Stenton Ave., Philadelphia, Pa.

# Sawing 8 $\frac{1}{2}$ -Inch Steel

A Notable Combination of Capacity and Economy



## The Cochrane-Bly No. 6 Cold Saw

Superior driving mechanism, with favorable cutting conditions for the saw, which insure straight, smooth cutting, enables the machine to do easily what ordinary saws cannot do at all; and the machine that works easily is the one that earns and saves money. The carriage travel is automatically controlled, and the constant speed drive and positive gear feed give 10 cutting speeds, while the rack and pinion stock feed enables one man to reset heavy bars for duplicate cuts in 10 seconds. It is a big capacity, high economy saw in every detail.

### WE MAKE

Five Sizes of Metal Sawing Machines  
Two Sizes of Automatic Saw Sharpeners  
Two Sizes of Die Filing Machines  
Universal Shaper for Die and Tool Work.

*Write for Catalogue of Either.*

**Cochrane-Bly Company**  
Rochester, N. Y.

## High Efficiency Cold Saws

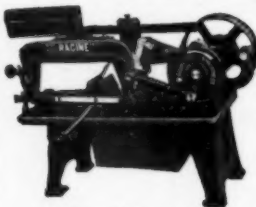


The Lea-Courtenay Cold Metal Sawing Machinery represents the last word in cold metal saw design. It has an increase in effective cutting range of 55% over other sprocket-driven metal saws of equal size, quick change gear feed, automatic stop, and power return to saw blade.

*Bulletin "K" tells the story.*

**LEA-COURTENAY COMPANY, Inc.**  
90 West Street, New York

## There's A Better Way To Cut Your Metals



Patented July 13-09

*Thirty days' free trial if you're doubtful  
—let us submit full details. Write*

**Racine Tool & Machine Company**  
The Junction, Racine, Wis., U. S. A.

Dependable delivery of fast good work is not possible with an old style "See-Saw" type power hack saw.

Only a machine tool—a "glorified" hack saw—can do the work as it should be done in the time that you would like it to be done.

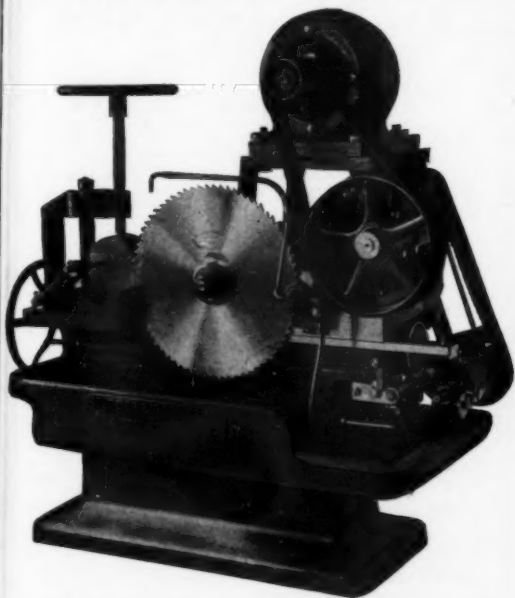
The Racine High Speed Metal Cutting Machine solves the metal sawing problem.

It does the work. It doesn't cost a fortune. And its upkeep won't eat up its time-saving.

Mo  
8-i  
power  
1½-in.  
paten  
produ  
Wr

# Motor Driven Metal Sawing Machines

Made in Sizes 4, 6, 7, and 8-in.



**8-in. Machine, Capacity 8½-in. Rounds, 8-in. Squares**

A solidly built modern tool of especially effective design, with powerful 43-to-1 gear drive and quick change gear feeds from  $\frac{1}{8}$ -in. to  $1\frac{1}{2}$ -in. a minute. The saw is 22-in. diam. by  $\frac{3}{16}$ -in. thick, with B. & S. patent relieved teeth. For all kinds of steel cutting they are the largest producers of the solid blade milling saw type, and are not saw breakers.

*Write for description of Sawing Machines and Automatic Saw Sharpeners*

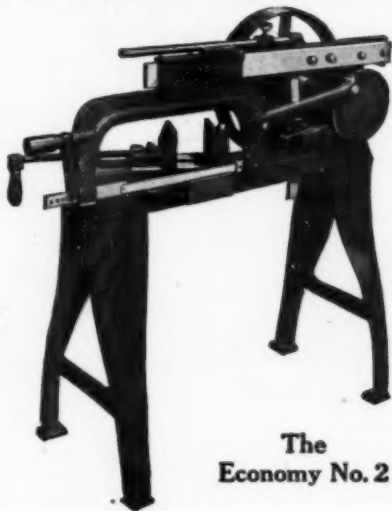
**Nutter & Barnes Co.**

**326 A. Street,    ::    ::    ::    ::    Boston, Mass.**

# Try Before You Buy

That is the plan on which we sell our

## New Power Hack Saw



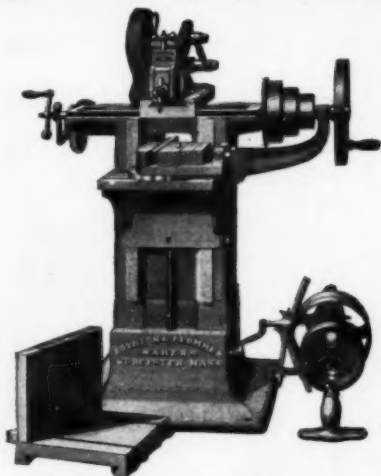
### The Economy No. 2

They are so good that we really take no risk in satisfying the buyer with an actual trial in his own plant before the sale is made. This No. 2 cuts up to 6x6, uses a 10-inch blade, has more good features than we could describe in three pages, and like the others never fails to make good. If you saw metal, we have the right machine for you.

*Let us know just what you have to saw  
We'll have something interesting to tell you*

**W. Robertson Machine & Foundry Co.**  
Buffalo, N. Y.

## Improved Shaping Machines



### 6x9, 8x12 and 10x15-in. Shapers

These modern tools are particularly desirable for tool makers, die sinkers, railroad, repair and other shops where there is much short work to be done by filing or planing. They are great labor savers, and for many purposes are preferable to the much more expensive large planer.

### SPECIAL

The 6x9-inch shaper, length of traverse 14 inches, with countershaft and swivel chuck, including plain chuck 14 inches long, **\$160.**

Write for Shaper Catalog, also separate Catalog of Post Drills, Bolt Cutters, Bending Machinery and Nut Tappers.

**Boynton & Plummer, Inc.,**  
Worcester, Mass.

It  
saves  
its price  
over and  
over  
again  
every  
year



Write for  
Booklet  
"E-8"  
showing  
several  
styles  
and  
sizes

## "The Handiest Tool in the Shop" Portable Floor Crane and Hoist

makes one man worth a dozen for the heavy lifting and conveying in shops and factories, saving time, muscles and material.



This is a scene from a shop that is like a pitcher without a handle. Compared to the rest of the shop, the cost of the "Handiest Tool" Portable Crane is even less insignificant than that of the handle to a pitcher; but its value as a time saver is almost beyond estimation.

**The Canton Foundry & Machine Co.**  
Canton, Ohio



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It's easy  
to speed up  
or slow down with a



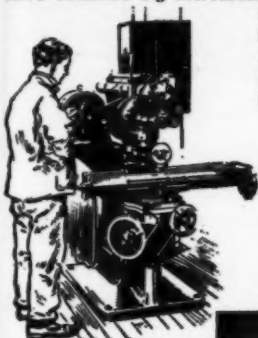
## Reliance Adjustable Speed Motor

ist  
d con-  
aterial.

To be a time saver and increase output, any method of speed control must provide accurate adjustments and be easily operated. With Reliance Type AS Motors the adjustments are made so quickly and easily that the operator takes full advantage of the time saving possibilities and keeps his machine speed at the highest practicable point. Turning the hand wheel shifts the motor armature, giving any speed within the range of the motor. No electric controller is used and there are no steps—no jumps. The right speed without current loss can be obtained exactly to suit any cut on any material with any tool.

Haven't you machines in your shops that would turn out more work if provided with a powerful drive and a convenient and accurate method of speed control? Others have obtained big increases.

One printing press manufacturer is finishing five cylinders a day on a lathe that formerly turned but three. Let us help you to obtain similar results.



*Folder 10L gives details.*

**Reliance Electric &  
Engineering Co.**

1050 Ivanhoe Road  
Cleveland, Ohio

without  
of the  
ificant  
a time  
Co.

# Today's Foresight

## Is Better than Tomorrow's Regrets

You are bound to find out some day what a convenience the Greenerd is, how it saves time, material and delays, and how little it costs. There can be no regrets if you order today—on approval, if you wish—that's fair enough.

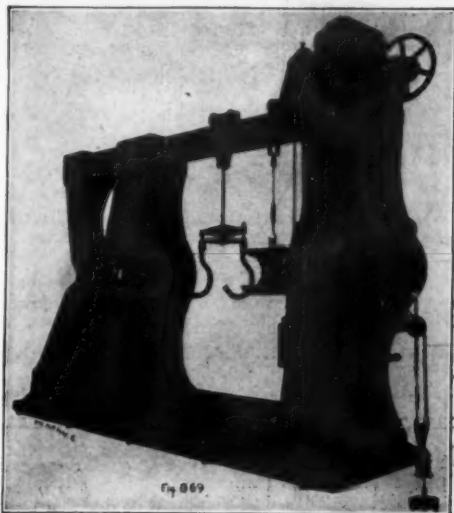


### *Greenerd Arbor Presses*

are made in numerous styles and sizes, up to 25 tons pressure, for driving arbors, crank pins, bushings, etc., and are used for broaching, punching, bending with dies, and 99 other purposes. You need them—today—tomorrow. Inquire of your dealer or write direct to

**Edwin E. Bartlett,**  
**336 A Street, Boston, U. S. A.**

## "For Your Pressing Needs"



**NO QUESTION** but that this press is built for service. If large wheels and axles are to be handled the strain rods are shifted to meet the conditions. If small ones are in evidence the press is ever ready. A pressure of 400 tons may be delivered to seat the wheel on the axle.

Note the small amount of mechanism controlling this press.

We should be glad to explain the makeup and working of this press in detail or give full information about any of our numerous presses to any who might wish to know more about them.

*Yours for the asking*

**The Hydraulic Press Manufacturing Co.**

**72 Lincoln Ave., Mount Gilead, Ohio**

**Eastern Office:—Room 1105 Z, 39-41 Cortlandt St., New York City**  
**Chicago Office:—164 N. Clinton St.**



Cut out the "Maybes" and *know* what your Stamp-  
ing Presses and other machines are producing.

## Durant Counters

show up Every Workman and Machine. They are designed,  
built and sold *right*. Their count is absolutely accurate.

*Our new 1913 Catalog No. 15 should be in your hands. Ask for it.*

**THE W. N. DURANT CO., Milwaukee, Wis.**

## Steel Handles

**Ball Crank, Compound Rest,  
Ball Lever Handles, etc.**

Accurate, highly finished, complete  
on receipt and ready to attach.

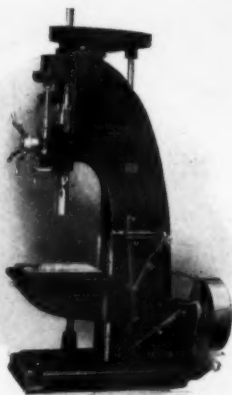
Manufactured as a specialty and sold  
below the manufacturing cost of cast iron  
or forged handles.

Catalogue of standard handles, with  
prices and discounts, on application.



**The Cincinnati Ball Crank Co.**

**Oakley, Cincinnati, Ohio**



## **Foote-Burt High Duty Drills**

For drilling with High Speed Drills to their full cutting edge capacity. Its strong, rigid construction is clearly shown in cut. Spur gears are used entirely, except one pair of 2 to 1 bevel gears, and everything is driven in a straight line with the result that practically all power is transmitted directly to drill point.

Built in seven sizes with capacity from  $1\frac{1}{4}$  to  $3\frac{1}{2}$  in. and swings from 20 to 60 in. From this list of sizes the right size machine is obtainable which is best adapted for certain work.

*For details write us*

**The Foote-Burt Co., Makers**  
**Cleveland, Ohio**

Hand wheel for securing belt tension.

Location of spindle drive.

Oil protector spindle drive.

Rack adjusting lar and nut.

Rack stop adjusting screw.

New rack stop.

Thrust bearing with highest German balls and dust protector.

Patented slide handle.

Portion of system.

Guard to prevent chips and work from the ways.

Table locking handle.

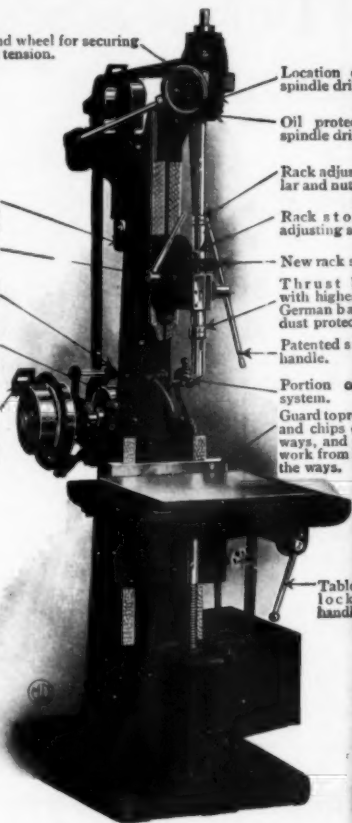
Cam lever for raising or lowering idler pulley bracket.

Patented spindle arm clamp.

Guide to keep belt in position when changing speeds.

Rear shaft pulley with new automatic lock allowing the pulley to be shifted by hand without a wrench.

New shifter, shifting belt from any degree of the circle surrounding the drive pulley.



# Drilling Economy

means making more holes than you are now making, and making them for less money per hole. In sensitive work, this means again the

## Henry & Wright New Ball-Bearing Drilling Machines Classes B & C

They are a development of our earlier type of sensitive drilling machines, and show as marked improvement over them as they, in their day, showed over the machines which up to that time were accepted as standards for small drilling.

The new Henry & Wright features, some of which are indicated in the engraving opposite, embody the results of a careful study of our older machines under the most exacting operative conditions in shops where the requirements are severe and where the maximum output is demanded all the time. That the new type excels the older one in speed, in convenience of operation and in economy, measured by the saving made in the cost of the work actually done, sufficiently demonstrates the merit and value of these improvements.

They will save money for you as they are saving it for others. Why not let us show you some actual cost comparisons?

*Did you get one of our drilling charts, showing the most economical speeds and feeds for drills? If not, write us; we will gladly send one free.*

**The Henry & Wright Mfg. Co.**  
760 Windsor St., Hartford, Conn.



## Myers Bench Drill

Ball Bearing Thrust  
Swivel Table  
Two Speeds  
Countershaft attached  
Chuck fitted to spindle  
Steel pinion  
Drills to center of 10½"  
Weight, crated, 80 lbs.

**FULLY GUARANTEED**

Priced lower than any  
other drill of its size

*See them at your own  
dealer's store, or address*

**Myers Machine Tool Co., Columbia, Pa.**  
Philadelphia, Pa., Office & Salesroom, 249 N. Third St.

## **Did You Ever Stop and Consider**

**Your disadvantage in carrying about  
heavy and cumbersome tools?**



Study the *general design* and *construction* of the

### **Temco Model B Drill**

The convenient shape and extreme lightness in weight eliminates fatigue and gives you greater production.

A specially constructed motor for portable drill service assures you long and satisfactory use.

**30 days' approval** in actual service is the best evidence we can offer.

*Give us your voltage and we will make prompt shipment.*

**The Temco Electric Motor Co., 55 Sugar Street,  
LEIPSI, OHIO**



# No Intelligent Machinist



orders unsatisfactory tools more than once. And it's "Repeat Orders" we want so we make all "Detroit" Tools as well as the best materials, human skill, 26 years' experience and exacting inspection can produce.

## "DETROIT" TWIST DRILLS

prove by *actual service* that they reduce shop costs. They give the highest drilling efficiency regardless of materials or conditions. They cut fast and deep and insure accurate, precise work. Each one leaves the factory with a positive guarantee to perform the hardest work with the least re-grinding and to run true from tip to shank.

"Detroit" Drills are made in all sizes and styles—grooved and taper shank, carbon and high speed steel.

Test "Detroit" Drills on a tough job. The result will interest you. So will Catalog "J" and our special trial offer.



## Detroit Twist Drill Co.

510-522 Fort St., Detroit, Mich.

1926 Wabash Ave., Chicago

30 Church St., New York

633 Market St., Philadelphia

331



## Burke Quality Excels on Fine Points

To get the  
**Burke**

quality, be sure that the name and address (Conneaut, O.) are cast on the frame of the machine.

**For Sale Everywhere**

## 14-Inch Sensitive Drill

**For Particular People**

An accurate, high-grade drill press that is unusually efficient and convenient, with forged and ground high carbon steel spindle and ball bearing thrust. The upper table, which swings around column, has bracket for angular drilling, also stop pin or locking bolt. The lower table is adjustable vertically and interchanges with combination centering device—three centers in one. Vertical adjustment of lower cone provides for taking up slackness of belt.

*Write for special circular*

**ROCKFORD LATHE & DRILL CO.,**



**Rockford, Ill.**

CAN YOU BEAT IT  
FOR \$100<sup>00</sup>

*Drills  $\frac{3}{4}$ " holes-Taps  $\frac{1}{2}$ " holes*



Not a delicate  
tool but a heavy  
rigid manufactur-  
ing drilling machine  
equipped with  
belt tightener-  
Automatic  
tapping device

ASK  
US  
?

H. G. Barr

21 Hermon  
Street

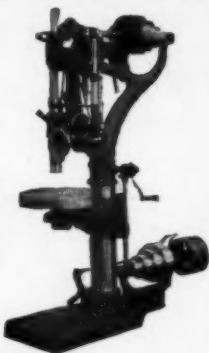
Worcester  
Mass.

## The Sturdiest Of Them All

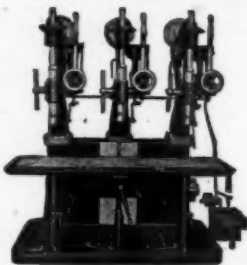
And besides that, our machines embody the utmost of power and capacity—all the vital requirements for low drilling costs as demanded in modern shop practice. Our line of Standard Upright belt-driven Drills come in sizes from 14-in. to 36-in. Cut shows 23-in. size. Our Gang Drills are made with 2 to 6 spindles.

*Get posted on this up-to-date line, and see how well they save money and time*

**Mechanics' Machine Company**  
Rockford, Illinois



## Rockford Gangs



They not only drill, but they bore, ream, tap and face without removing work from jig.

*Write for descriptive matter*

**Rockford Drilling Machine Company**  
Rockford, Ill., U. S. A.

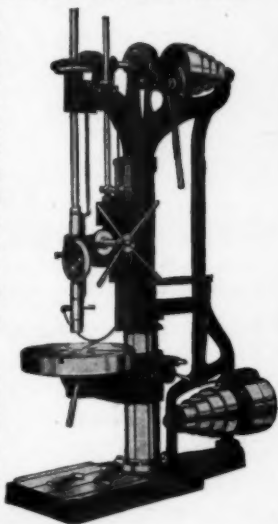
# Aurora 14 to 44-in. Drills are **Built Heavier Than Usual**

**With Speed and Power for Heavy Work**

Examine the 32-in. Aurora Drill, here illustrated. Note the strong design and solid build. The tight and loose pulleys are larger and wider than on any similar drill on the market—14-in. diameter and  $5\frac{1}{8}$ -in. face. Weight of machine on skids, 2,800 lbs.

The 6-change feed box has a solid bottom which can be filled with lubricant and forgotten for a month or more.

Aurora Drills are strictly modern in construction and equipment, are built right for high speed service and lots of it, and are right in price. Belt or motor drive, as desired.



*Will quote very close prices on the sizes you need*

**The Aurora Tool Works**  
Aurora, Indiana



No. 26

**\$35.00**

**For This  
Bench Drill**

with chuck and  
countershaft.

**Six Speeds  
Belt Tighteners**

A new line of Bench  
Drills, foot lever and  
column.

*Send for circular*

**Reed Drill Company**

43 Hammond Street,

Worcester, Mass.

**20" Power Drills**

Made in  
**Eight Styles**

Round or Square Base

**LEVER FEED**

**LEVER and WHEEL FEED**

**POWER FEED and Automatic  
Stop**

**POWER FEED with Back Gears  
and Automatic Stop**

*Send for catalog*



Fig.  
862

**The Silver Mfg. Co.,** 385 Broadway  
SALEM, OHIO

## **NOTE** the **Convenience**

in drilling hole in a sleeve at an incline, and using drill guide to prevent drill from running.



## **The No. 1 Knight** **Saves Valuable Minutes**

in the tool room, experimental department, or on hard machining, where every move comes under the head of high priced labor.

The Knight Milling and Drilling Machines save from 20 to 50% of time on dies, jigs, moulds, etc., for they have the convenience of two or three ordinary machines. Made in three sizes.

*A better buy hasn't come your way for a long time*

**W. B. Knight Machinery Co.**  
**St. Louis, Mo.**



*Our Circular shows  
16 difficult and in-  
teresting opera-  
tions performed  
with this time-sav-  
ing tool.*

*Send for a copy.*

# KEYSEATER

For Your

## DRILL PRESS

We make them in 20 sizes

Ask for booklet



Bushing for different diameters

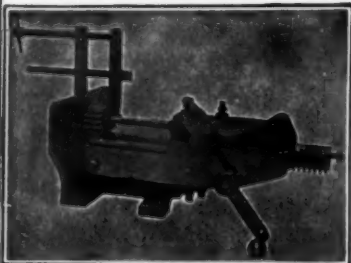
**National Machine Tool Co.**

128 Opera Place

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## *The Champion*

A Hand Operated Key Seating Machine



Will make key-seats as rapidly and accurately as the expensive stationary machines, and can be used on light or heavy work, in any part of the shop. Many jobs that cannot be done on a stationary machine can be readily done on the Champion. A great time and expense saver.

*For price and complete description address*

**F. L. Schmidt Company**

150 Eleventh Avenue,

New York, N. Y.

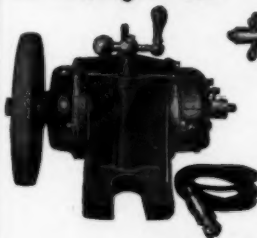




# Electric Air Cooled Drills

**Are Best by Test**

Are You Still Paying Two  
or three prices for a job  
just because you have al-  
ways done so



The fact that the U. S.  
Government tests prove they  
are superior in every respect  
should be convincing evidence  
to all users of this type of tool.

## Aside From This

there's the evidence of thousands of users all over the United  
States. Would they use them if they were not the best? Hardly.

**Want a Catalogue? A Postal will bring it.**

We use aluminum for Casing on all Drills to cut down weight  
Power from any Lamp Socket

**SENT ON TRIAL ANYWHERE**

*Made for alternating or direct current  
Just attach it to your nearest lamp socket*

**The United States Electrical Tool Co.  
Cincinnati, Ohio**

NEW YORK, 50 Church St.

BOSTON, 12 Pearl St.

CHICAGO, 8 E. Michigan St.

PHILADELPHIA, Heed Bldg., No. 1211 Filbert St.

## Positive Pressure Blowers and Vacuum Pumps. Patented.



In all sizes  
and for  
all services

—  
Quiet Running

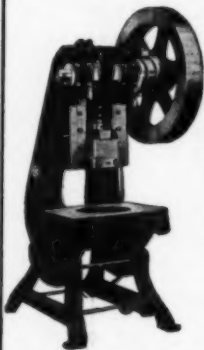
—  
Highly Efficient

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Carefully Built

—  
Write for data

**THE LEBRAN CO., 940 N. 9th St., Phila., Pa.**

## There With "The Punch"



THE POWER—the, produc-  
tive power is greater in

HIGH DUTY  
**ROCKFORD**  
PUNCH PRESSES

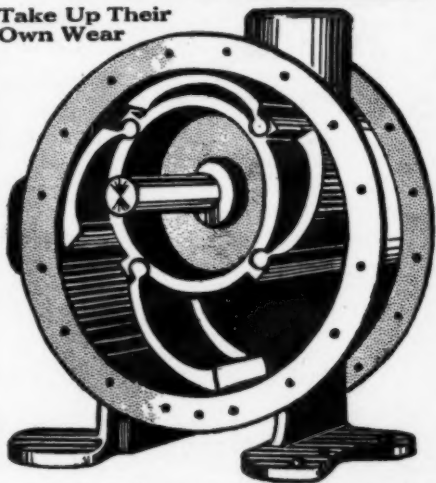
because friction load is cut  
ONE HALF. All power is  
transmitted to slide. Rigid  
construction enables every bit  
to be realized.

Write today for catalog

**Rockford Iron Wks.**  
**ROCKFORD, ILL.**

LEIMAN BROS. Rotary High Pressure  
**BLOWERS AND**  
**VACUUM PUMPS**

Take Up Their  
Own Wear



for use with all oil, gas and coal burning appliances; for blowing chips from machines, stampings from presses, blowing out dust from motors and machines, agitating liquids, sand blasting, and in connection with automatic machines of many kinds. Also used for

**VACUUM CLEANING**

Capacities 2 to 338 Cubic feet per minute  
1 oz. to 10 lbs. pressure, 1 to 20 inches Vacuum

*Blower Catalog No. 26—Vacuum No. 27*

**LEIMAN BROS., 62 R John Street, N. Y.**



**H I G H      S P E E D**

**Some KELLY "Points"**  
 They last a lifetime, "Save" first piece reamed  
 Continue to save money  
 The "big fellows" are doing so now

Our 48-Page Catalog may start you into Modern Methods. Ask for it!  
**THE KELLY REAMER CO., - Cleveland, Ohio**  
 London      Sidney      New York      Detroit      Boston



**DON'T RUN AWAY** from your set screw troubles.  
 Stay, and rectify them with the

### **Allen Safety Set Screw**

It is a new screw—a safe screw—and a guaranteed one  
 Insist that your dealer gives you the ALLEN.

**We Make a Large Line of Safety Lathe Dog Screws**

Ask for booklet No. 13

**The Allen Mfg. Co., Inc., Hartford, Conn.**  
 Canadian factory, 29 St. Davids Lane Montreal, Canada.

# Imitation

**Is the Sincerest Form of Flattery  
But Not the Real Thing**



The fact that more Jacobs Improved Drill Chucks were purchased during January 1913, than in any other month during our phenomenally successful career, is more convincing proof of their superiority than even that one Drill Chuck manufacturer, who boasts of thirty years of varied experience in keeping pace with changed conditions, has made three attempts to imitate the Jacobs Improved Drill Chuck.

Why is our Chuck preferred and imitated? More than 140,000 users of the Jacobs Improved Drill Chuck know why. Ask them.

*Our 34-page illustrated catalogue is sent upon request.*

**The Jacobs Manufacturing Company**

**32 Union Place, Hartford, Conn., U. S. A.**

**It's New and Smaller**  
**Burke's Bench Miller No. 0**



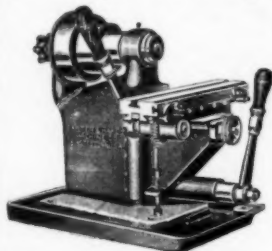
Longitudinal feed, 4 in.; traverse feed, 1½ in.; vertical motion to knee, 3½ in.; maximum distance between center of spindle and table 4 in.; table surface, 3x9 in.

Just the thing for small work. Finished, fitted and tested with the same extreme care as our larger Bench Millers, and sold at a very close price. You can't beat it; it's a Burke.

*Write for description and prices, and consult with us about your milling requirements. We are at your service.*

**The Burke Machine Tool Co.**  
 Conneaut, O.

**It Pays to Buy Our Kind**



You will find this Bench Miller as represented. It not only looks well on paper but it acts well when set up for business, and will save you money, especially on those light cuts.

*Send for Circular*

**The Carter & Hakes Co.**  
 West Winsted, Conn., U. S. A.

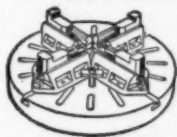
AGENTS—Marshall & Huschart Mchry. Co., Chicago, St. Louis, Indianapolis; Mott & Merryweather Mchry. Co., Cleveland, Detroit, Cincinnati, Pittsburg.

# The Horton Line

## Face Plate Jaws and Chucks

### For Lathes, Planers and Drills

A selected line, the superiority of which has been demonstrated in widespread service



These face plate jaws have the advantage of fitting close to center; can be held by side flanges, as well as by ends; will hold as small work as a chuck—a most

decided advantage. For range and convenience you ought to try them.

The sliding jaw is reversible in the 4 and 6-in. Size. The whole jaw reverses.



## Morrow Drill Chucks

Now made by Horton

Hand-operated, Ball-bearing, Self-tightening, Quick-releasing

The chuck that works with a twist of the wrist, requiring neither key, wrench nor spanner. These chucks are accurate, and hold drills true from shank to point; they will positively hold straight shank drills without slipping. They are an economy in any shop, because they save so much in time and trouble. Thousands are in use in this and other countries, proving their success and the continued satisfaction of users. Try one yourself, and note the time saved in comparison with any other chuck. Five sizes.



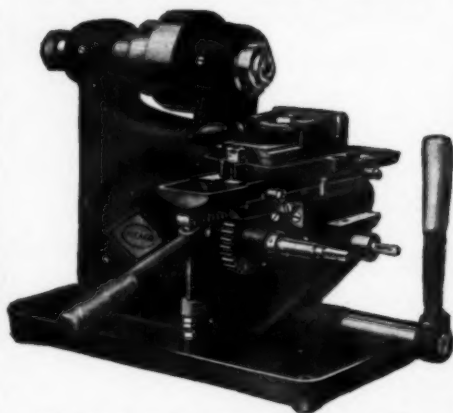
*Horton catalogue and prices at your command*

**E. Horton & Son Company**

Windsor Locks, Conn.

**While Our Overstock Lasts  
On This Size**

# **Bench Miller**



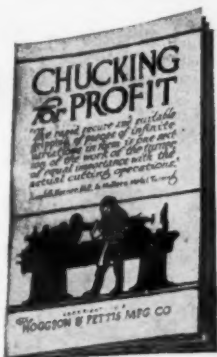
**\$75.00 Spot Cash**

**This is your opportunity**

**Chicago Machine Tool Co.  
127 N. Canal Street,  
Chicago, Illinois**



**Will You  
Accept a Copy  
of this  
Meaty Little  
Book  
if We Send it  
Free?**



In many shops the job tickets show excessive time spent in chucking the work. This often changes what should be a profit into a loss, for the man's pay is the same for chucking time as for turning time.

Inadequate chucking methods also result in the unnecessary scrapping of much costly material.

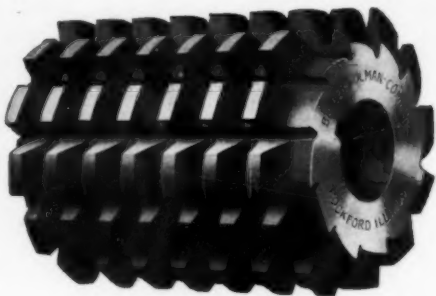
"Chucking For Profit" will help you reduce these wastes in your shop—help you add to your net profits. It is full of valuable information for the practical-man-on-the-job, the foreman, the master-mechanic and especially for the **man who pays the bills.**

Tear out this page, write or stamp your name and address below, and mail it to us today. Your personal copy of the book will be sent at once, entirely free of cost or obligation.

**The Hoggson & Pettis Mfg. Co., New Haven, Conn.**  
**Makers of the Sweetland Chuck**

Name .....

Address .....



## **Accurate Hobs**

**For Cutting Spur and Spiral Gears**

Guaranteed for accuracy—the quality that makes quiet running gears. They have the reliability that the careful manufacturer wants to know about, and it will give us equal pleasure to tell you.

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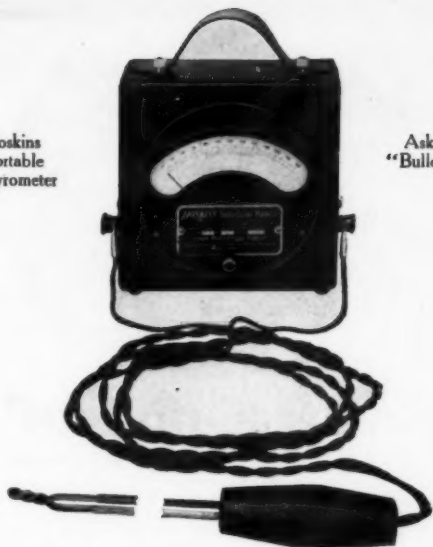
*Just ask for Catalog "B"*

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**Standard Hobs in Stock      Specials to Order**

**Barber-Colman Company**  
**Rockford, Illinois**

Hoskins  
Portable  
Pyrometer



Ask for  
"Bulletin 3"

Case Hardening, Annealing and Tool Hardening necessitate the use of an accurate and practical temperature gauge.

Such is the Hoskins Pyrometer. It possesses all of the ruggedness and adaptability required in the shop, and a very high degree of accuracy.

Hoskins "Bulletin 3," just printed, is filled with interesting pyrometer information and shows that Hoskins Pyrometers are the kind you want. Send today for "Bulletin 3."

## HOSKINS MANUFACTURING COMPANY

*Electric—Furnaces, Pyrometers and Heating Appliances*  
*"International" Ammeters and Voltmeters*

461 Lawton Avenue, DETROIT

Otis Bldg.  
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NEW YORK 395



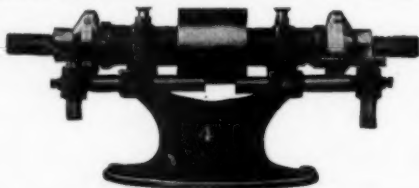
## Emery Grinders

**Better Ones for Your Money**

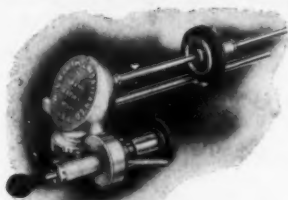
They look like others, but are different in details of design and construction. Built like machine tools, with the arbors and collars accurately turned and balanced, and properly lubricated and protected against dust. They run easier, last longer and give better service. Made in quantities sufficient to keep down manufacturing costs, and the price. I can interest you in Bench, Column, and Cabinet Grinders, Foot Presses and Bench Tapping Machines. *Write me.*

**E. O. PARTRIDGE**

2047-9 Lake Street, . . . CHICAGO



# Grinding Lathe Centers

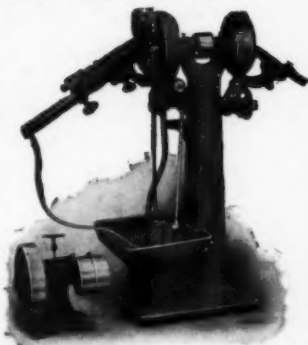


Is an every-day job in almost every shop. Can every lathe operator down to the apprentice do an absolutely perfect job with your present means? He can with the Wilmarth & Morman Center

Grinder. "A Brief Treatise on Lathe Center Grinding" sent free on request.

## Grinding Drills

Can your boy grind your drills in less time and do a better job than the "old man"? Yes, if you have one of these new style WPL New Yankee Drill Grinders. They save four-fifths of the breakage of drills and reduce wear about one-half also, to say nothing of added drilling efficiency.



We also make surface grinders, cutter and reamer grinders, etc.

*Complete catalog free*

**Wilmarth & Morman Co.**

**575 Canal St., Grand Rapids, Mich.**

# A-Wet-Tool-Grinder

That Will Give Perfect Satisfaction



**For 30x3 in. Wheels**

Heavily constructed with self-oiling bearings throughout, and can be run constantly, doing away with the delay of starting and stopping.

Equipped with our Vertical Centrifugal Pump which has no packing to wear out and leak, and which furnishes a constant supply of water.

**Built in 30 and 20-inch sizes.**

*Write for catalogue No. 14*

**J. G. Blount Company**  
**Everett, Mass.**

# The World's Most Popular Disc Grinder



18-inch diameter Disc  
Wheels

5-inch Driving Belt  
Total Weight, 1400 lbs.  
Code Word: JOLT

## No. 10—18-in. G Besly Grinder

For General Fitting and Finishing, and Manufacturing operations requiring 18 in. diameter disc wheels.

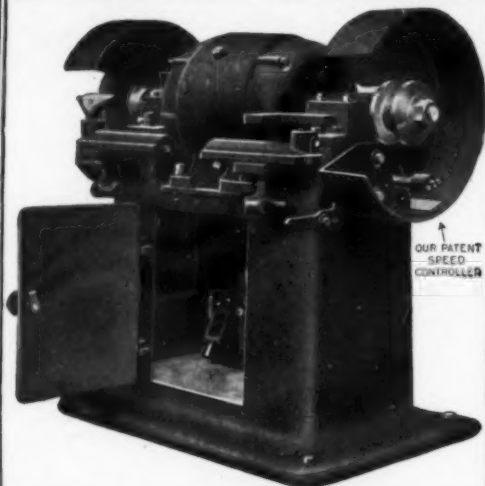
One of the most useful tools known to machine shop practice.

Costs only Six Cents a Day for Interest on Investment.

*Ask us for details.*

**Charles H. Besly & Co.**  
Chicago, U. S. A.





## As The Emery Wheel Wears Down

**It automatically increases the speed of the Motor, which keeps the periphery speed of the Grinding Wheel constant.**

**NO MATTER** what the diameter of the wheel, it travels at the same rate of speed at the grinding surface. It gives maximum service all the time and cannot run too fast for safety. This is accomplished by means of

### **The Ransom Patent Speed Controller**

which regulates the speed of the motor to correspond to the diameter of the emery wheel.

These machines are made in all sizes.

*Free Bulletin No. 9 gives full description*

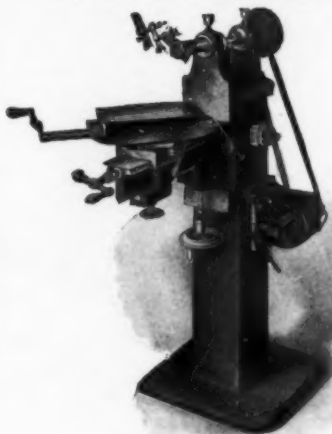
**Ransom Manufacturing Company**  
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# Garvin

## Universal Cutter and Surface Grinder

Simple, light running, easy to set, accurate, large capacity and all varieties of cutters provided for. Will grind Cutters 14 in. x 6 in., and Surfaces 6 in. x 9½ in.



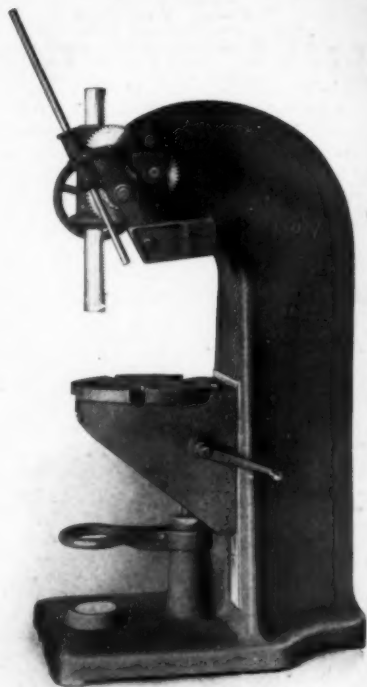
Universal Cutter and Surface Grinder, with Motor Drive

*Immediate Delivery*

**FOR FURTHER** { **ASK YOUR DEALER**  
**INFORMATION** { **OR**  
**WRITE US DIRECT**

*Send for Pamphlet No. 168*

**The Garvin Machine Co.**  
Spring and Varick Sts.,      New York City



The No. 7 Greenerd Arbor Press,  
like the Greek God, sprung into  
life full grown and perfect.

Ge

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# *The* **General Arbor Press** **Number 7**

is the latest and largest of arbor presses. Having a leverage of 25 to 1, the No. 7 will easily get twenty-five tons ram pressure. Takes diameters of 36 ins and weighs 2500 lbs.

may pay you handsomely to find a place for the No. 7 *General Arbor Press*.

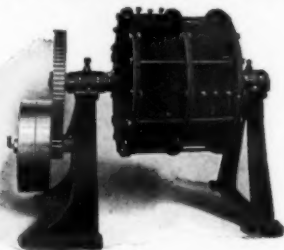
*We make 13 other sizes*

**Edwin E. Bartlett,**  
34 Street, - - Boston, U. S. A.

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## The Abbott Process Burnishing With Steel Balls

hardens and polishes the surface of small metal parts without abrasion. It produces a better finish than buffing, and is immensely quicker and cheaper. The saving is from 75 to 99 per cent—or more—of the cost.



### The Abbott Burnishing Barrel

Is narrow and of large diameter. In operation it is half full of steel balls, weighing several hundred pounds, which work into a high pile and, in sliding down, bring weight and friction upon the work. Each ball is an individual burnishing tool, and thousands are working at once. This is Steel Ball Burnishing, of which we are the originators.

We have been sending Abbott Barrels and Abbott Balls to responsible concerns on approval for over three years. In most cases we receive a check before the approval time expires.

*Write for booklet and send samples for burnishing*

**The Abbott Ball Company**  
**Elmwood District                      Hartford, Conn.**

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ORIGINAL UNIVERSAL GRINDING MACHINE

An example of striking contrast is the first universal grinding machine as exhibited by Brown & Sharpe at the Centennial Exposition, Philadelphia 1876, and a modern representative of our line of universal grinding machines.

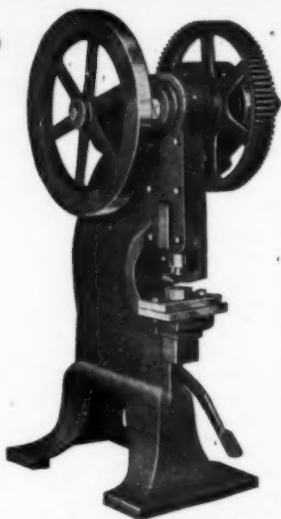
*If interested, advise your grinding requirements.*

**Brown & Sharpe Manufacturing Co.**  
Providence, R. I., U. S. A.



No. 3 UNIVERSAL GRINDING MACHINE

# Whitcomb No. 5 Power Punch




---

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**Four Sizes**  
**From  $\frac{1}{4}$ " in  $\frac{1}{4}$ "**  
**To  $\frac{5}{8}$ " in  $\frac{5}{8}$ "**

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**One of the new Whitcomb Line of  
Punches and Shears**

**Immediate Delivery on**

No. 1 Hand Shears  
No. 2 " "  
No. 3 " "  
No. 4 " "  
No. 5 " "

**In One Week**

Hand and Power Shears

**In Two Weeks**

Power Shears

**Modern Lathes and Planers**

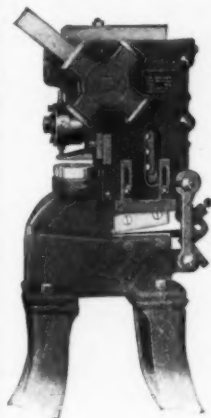
*We invite your inquiry*

**Whitcomb-Blaisdell Machine Tool Co.**  
**Worcester, Mass., U. S. A.**

# The Union Punch, Shear and Rod Cutting Machine

Made in three sizes.

All hand operated



The only machine made that combines the *three principal operations* in the working of metals—punching holes, shearing sheets or flat bars, and the cutting off of round or square rods.

It is a useful machine for every factory that has a tool room or repair shop.

Cut shows the No. 2 size, mounted on legs, designed for the general manufacturer.

**Cuts** wire or rods  $\frac{7}{8}$ -in. square and  $\frac{1}{2}$ -in. or  $\frac{3}{8}$ -in. round.

**Shears**  $\frac{5}{8}$ -in. x 2-inch flat bar or No. 8 gauge plate.

**Punches**  $\frac{3}{8}$ -in. hole in plate  $\frac{1}{4}$ -in. thick.

*Complete Catalogue on request*

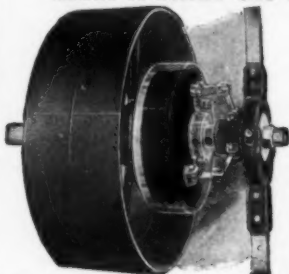
**Union Manufacturing Co.**  
Shear Department

26 Cortlandt St.,  
New York

New Britain, Conn.

# **The Edgemont Plate Clutch**

**Made to Stand Use and Abuse**



**Dust and Dirt**  
don't bother it any  
—wearing parts are  
fully protected.

**No Oil** or other  
attention of friction  
mechanism required.

**Catalog D.** shows  
the Edgemont line.  
We make regular  
and special clutches  
for all transmission  
purposes. Put your  
clutch problem up  
to experts.

## **The Edgemont Machine Co.**

**National Ave. & Neibert St., Dayton, O.**



### **"Our Grant Riveter**

**Is the Most Valuable Machine  
We Have in Our Plant."**

**So Says One of Our Customers**

### **WHY?**

A boy or girl at \$1.00 a day is  
all that is required to operate the  
machine with perfect success.

The machine will do better  
work and much more rapidly  
than can be done by any other  
machine on the market.

We invite you to send us sam-  
ples of your work, which we  
shall rivet and return to you,  
giving estimate of output and  
any other information you may  
desire.

*Send for catalog which shows  
several different sizes and styles  
of machines for different requirements*

**The Grant Mfg. & Machine Co.**  
**C. E. Station, Bridgeport, Conn.**



## A New Gas Babbitt Melter

Supplied complete with legs and shelf, which permits placing anywhere convenient to gas and air supply



---

Made in two sizes

### No. 1-L

Capacity, 200 lbs.

Price, \$30.00

### No. 2-L

Capacity, 50 lbs.

Price, \$16.00

These prices are net  
F. O. B. Rochester.

No. 2-L can be furnished with burner for use without air pressure if required.

---

No shop is really complete without one of these handy, economical Melters. Tickles the men, too, for they can do their work quicker and better. Get in line by ordering one today.

## The W. P. Davis Machine Company

Builders of Lathes, Chucking and Cutting-off Machines, and Keysaters  
Rochester, N. Y.

## Don't Take Chances On Your Riveting



Our Elastic Rotary Blow Riveting Machine does **perfect work** and does it quickly by a series of light, elastic blows, every one on exactly the right spot. It will make a tight joint, fill a countersink or head over lightly so the pieces will swivel—all a matter of adjustment. The force of the blows is always under the control of the operator.

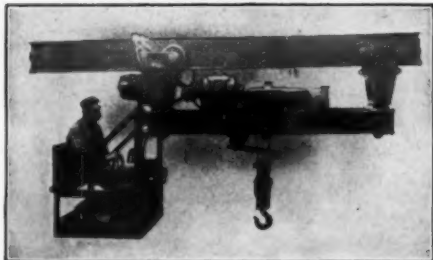
*Samples riveted if you wish.*

**The F. B. Shuster Co.**  
New Haven, Conn.

Formerly John Adt & Son. Established 1866

Automatic Staple Machines, Cotter Pin Machines, etc. Helix Coiling Machines, Foot Presses, Sprue Cutters, etc.

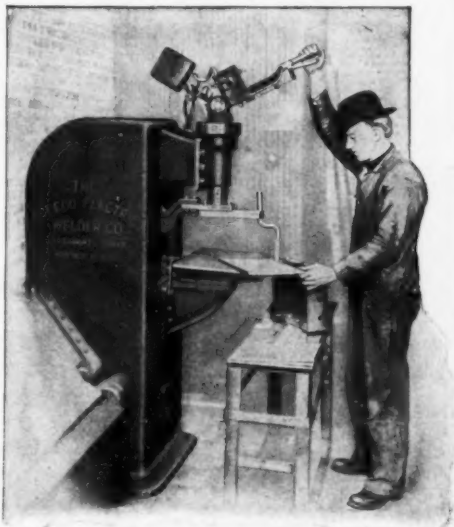
## Mono Rail Hoists and Over Head Track Systems



A 5-ton hoist operated from cab or floor for transferring material from one building to another, unloading cars, general yard work, etc. Mono Rail Hoists and trolleys of all types. Nothing too large or too small for our careful, prompt attention.

**The Euclid Crane & Hoist Company**  
Euclid, Ohio

# Riveting Costs Reduced From 60% to 500%



## It's the Electric Way

The boy shown in the cut is making junction boxes used by electrical people. Instead of punching holes and riveting, he is spot welding them. Why? Because it's cheaper and better than riveting.

Our free bulletin No. 12 tells the story. Bulletin No. 11 tells all about butt welding. And we'll tell you all about our free trial proposition.

**No Lease**

**No License**

**No Royalty**

**Toledo Electric Welder Co.**  
STATION A, CINCINNATI, OHIO



## ***The Collapsible Tap***

Makes good everywhere, because its construction absolutely insures continued duplication of threaded work. The form of the chasers prevents their clogging up with chips. Chasers can be ground on the end, thus easily kept in proper condition for bottoming.

### **Our rapidly operating Aero Chucks**

will increase your production from thirty to fifty per cent.

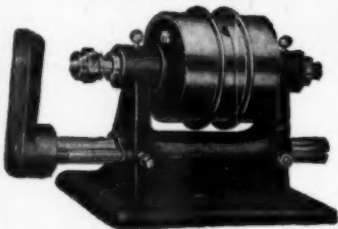
We are also builders of **Special Cost Reducing Tools** for manufacturing brass and iron goods.

*For further information  
ask your dealer or  
write us direct*

**Manufacturers Equipment Co.**  
171 N. Jefferson St., Chicago, Ill.

## **Burke's Tapping Machines**

**Are Rapid, Accurate and Convenient**



**Made in  
several  
sizes  
for  
tapping  
up to  
1/2-inch**

These tappers are built throughout with a good deal more than usual care, and you will be glad to know about them. If you will mail us your address, we shall be pleased to send full description and quote close prices.

**The Burke Machine Tool Co.**  
Conneaut, Ohio

**Are You In A Position**  
to appreciate the advantages of the  
**Geometric Threading Machine?**



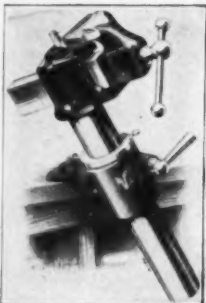
This Machine is doing a line of thread cutting that cannot be done on the usual Screw Machine, or turned out economically in any other way.

Threading Gas and Electric Fixtures, Automobile Parts, Spark Plugs, Brass Castings, Drop Forgings, etc.

*Send for the Descriptive Booklet*

**The Geometric Tool Co.**  
**New Haven, Conn.**

# The Victor Swiveling Vise



## Sold on Approval

**It's Handy:** Entirely universal, it sets instantly in any position, one lever locking all swivels.

**It's Rigid:** Doesn't rattle or jump under chipping or hammering, and swivels never wear loose.

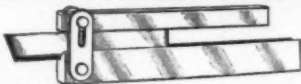
**It's Economical:** Enables the vise hand to do more and better work. He can stand in a natural position and keep work turned to the light.

*Write for full description and special approval offer*

**VICTOR VISE COMPANY**  
Springfield, Ohio.

## A NEW TOOL HOLDER The Handiest Yet

Only One Holder for All Sizes and Shapes of Tools



Shows Tool Holder with cutting-off tool, a narrow flat blade.



Reversed, holding small domestic pin, under No. 60 drill size.

For any kind of work only one Tool Holder is required. You make your own tools or we will furnish them at small cost. A simple, practical holder that we guarantee satisfactory. It is well worth investigation, and we ask you to write for descriptive folder that tells the whole story.

**Morgan Manufacturing Co.,** Redwood St.,  
Newport, R.I.

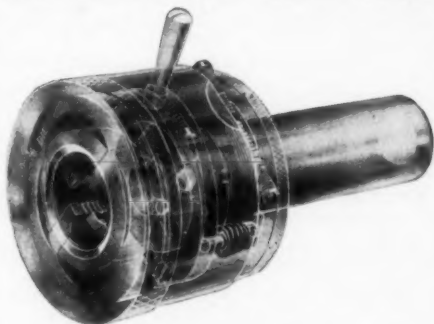
Are you using the most improved Type of Automatic Threading Die? If not, get in line and use

**New Model Type A**

# **Ideal Opening Die**

**Simple construction—Few Parts—and impossible to get tapered thread**

*Let us know your wants. Write for information regarding Die.*



This Die does not depend on any springs for opening. As soon as Clutch is disengaged the cutting strain opens Die.

*Sing a song of Die-heads,  
Ours is up-to-date;  
Half a dozen pieces  
Is its aggregate.  
When the Die is opened,  
It works without a spring;  
Chasers cut a perfect thread,  
As slick as anything.*

Manufactured By

## **The Ideal Tool & Mfg. Co.**

Office and Factory, BEAVER FALLS, PA.



## Are You Tired of Paying Big Bills for High Speed Steel?

### ARMSTRONG TOOL HOLDERS

Make 1 lb. of Tool Steel go as far as 10 lbs. in Forged Lathe and Planer Tools.

*Write for catalog—it tells other advantages*

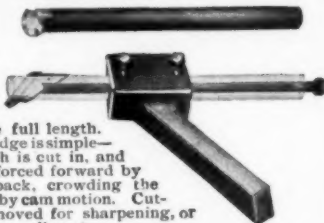
**Armstrong Bros. Tool Co., 308 N. Francisco Ave. CHICAGO.**



## Rigid and Reliable for Accurate Work

### Red-E Boring Bar and Internal Threading Tool

In this simple and very efficient tool the cutter is held solid with bar by a sliding wedge which supports cutter the full length. Action of the wedge is simple—a V shaped notch is cut in, and the sliding rod forced forward by set screw in back, crowding the wedge forward by cam motion. Cutter is easily removed for sharpening, or replaced at very small cost.



**Price, complete with threading bar:**

No. M-1, Size  $\frac{1}{2} \times 1 \frac{1}{2}$  .....\$4.20.

No. M-2, Size  $\frac{3}{4} \times 1 \frac{1}{2}$  .....\$4.20.

**THE READY TOOL CO., 40 South Ave., BRIDGEPORT, CONN.**



# On Your Hardest Work

Try the Eberhardt Turning Tools on the most difficult job you have, and be convinced of their superiority



The head contains more metal and is larger than the shank; this gives the greatest strength where there is the most strain, and enables the Eberhardt to stand up firmly under the most severe service.

The bottom and sides of the holder are square, with each other. The hole for the high speed cutter is also square, and the cutter fits so that when locked in place with the set screw it is as solid as a forged tool. Set screws are made of tool steel, hardened, and do not upset on the end even with constant use and abuse.

Besides getting top-notch dependability, you save all the forging and tempering, and 80% of the grinding. Just think that over.

*Suppose you try one—now—and give it  
the hard test you have in mind*

**Union Caliper Company**  
**Orange, Mass.**

We make a Complete Line of Holders and other Small Tools

# Pattern Shop Machinery

Special Prices if you refer to this ad.



## Band Saws

Chicago No. 00 27 in. Wheels

" No. 0 32 " "

" No. 1 36 " "



## Saw Tables

Chicago No. 5 Stationary Table

" No. 9 Tilting Table

" No. 10

Boring attachment if wanted.



## Jointers

8 in., 5 and 6 ft. tables and guard.

12, 16, 20, 24 and 30 in., 7 ft. tables and guard.

Trimmers, Lathes, Core Box Tools, etc.

Ask for full descriptions

**Chicago Machinery Exchange**

1214-1228 Washington Boulevard Chicago



Built in quantities, in a modern, specially equipped factory, the

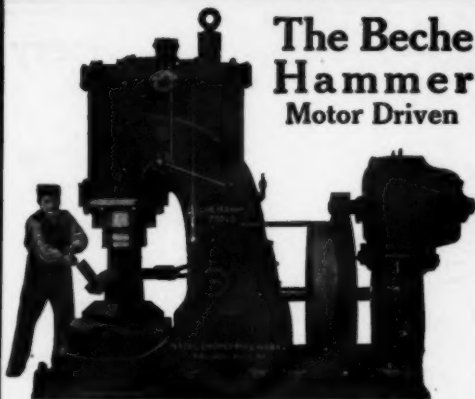
**Buda "Postop"**

**Ball Bearing Jacks  
Are Cheap in Price Only**

The ball bearings are of special type, with balls held in a phosphor bronze cage, which more than doubles their wearing surface on thrust plates, keeping them true and easy running. The positive stop—"Postop"—prevents accidents from raising the screw too far. These jacks are weather-proof, dirt-proof and fool-proof. They are made for every industrial purpose.

Write for illustrated booklet

**The Buda Company, Chicago**



**The Heaviest, Most Powerful, Efficient  
and Economical Hammer of Its  
Size on the Market.**

*Hammer and Compressor Combined, No Piston  
Rods, Springs, Straps or Cushions.*

**Simple—Durable—Reliable**

Powerful, non-bounding, squeezing blow. Positive, flexible control. Long stroke. Variable blows at will. No adjustments. Dies at any angle. Belt drive, no countershaft. Motor drive, geared direct.

**Sizes and Normal Capacities of Beche Hammers**

66 lb.	165 lb.	250 lb.	350 lb.	500 lb.	770 lb.
2" dia.	4" dia.	5" dia.	7" dia.	8" dia.	9" dia.

*Write for Catalogue and Prices*

**Nazel Engineering & Machine Works**

Sole Builders for United States and Canada

5th and Luzerne Sts. - - Philadelphia, Pa.

# There IS a Difference

**In Dust Collectors, and it's all in favor of the  
correctly constructed Morse "Rarefied"**

Operated on the partial vacuum principle, the suction never varies, and there's no cleaning out by hand. The hard, flinty, grinding dust is separated from the air current before the air reaches the fan, therefore all abrasion of fan parts is eliminated, and repairs are reduced to next to nothing.

## **For Health and Contentment**

pure air is a great aid. Workers on emery wheels, polishers, tumbling mills, sand blasts, etc., appreciate the cleanliness afforded by the Morse "Rarefied." It pays in many ways.

*Read the whole story  
in our free Booklet*

**The Knickerbocker Co.,  
Jackson, Mich.**





# Individual Lockers

## A Mighty Good Investment

The all-steel kind that Terrell makes save room, are a safeguard against fire and help to raise the self respect and therefore the working efficiency of your employees. Men are more cheerful when they are well treated, and cheerful men always make more for their employers. Good sanitary accommodations, including a clean and secure receptacle for personal effects, are really an earning proposition, not an expense.

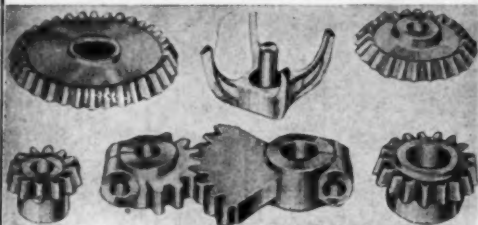
We have made rather a careful study of steel lockers, and we believe we have put some ideas into them that are worth while. We are always glad to refer to satisfactory installations we have made, and to place at the disposal of factory owners the information and experience in respect to them which we have accumulated.

*Ask us anything you want to know about Lockers,  
freely, and without obligation.*

**Terrell's Equipment Co.**

Hall & Division Sts.,

Grand Rapids, Mich.



## Die Castings Save Money

The Parker kind, made in smooth steel molds under heavy pressure, require no finishing, are true to form, exact in size, and from special alloys have the strength of cast iron or brass with the finish and accuracy of high grade machine work. Many shapes can be die-cast in a single piece, which if machined have to be made in parts and fastened together. We have facilities for prompt and adequate service. Let us tell you what we can do, and the cost.

**Parker White Metal Machine Company**  
840 E. 10th St., Erie, Penna.

## Even A Boy

Can make Soft Metal Vise Jaws and Hammers  
with these Moulds and Ladles



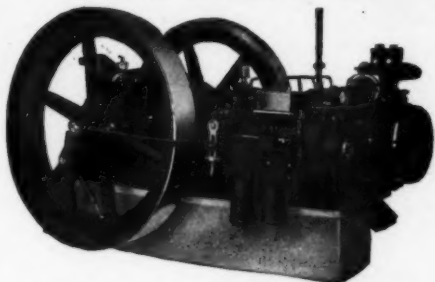
To make a hammer, it is only necessary to place in the mould a handle, which is merely a piece of pipe forged to form a T-shaped end, melt the metal in the ladle, tip it back, and the work is done. So simple and quick that the cost is hardly anything beyond the material, and that may be used over and over. A different shaped mould makes vise-jaws just as easily.

**A Great Convenience at Small Cost**  
*Write for prices*

**CHAS. H. FIELD, Providence, R. I., U. S. A.**

# A Better Power Plant

Without Expense to You



## The Elyria Oil Engine

25 to 150 H. P.

### *Here is our proposition:*

If you are using other than cheap natural gas, producer gas or water power, and if our Oil Engine fits your needs, we will install at our expense the most satisfactory and economical power plant you ever had,

### **And Take our Pay out of the Savings!**

If this looks good to you, write us about your present power, its cost, and mention the price you would pay for the cheapest fuel oil in your market.

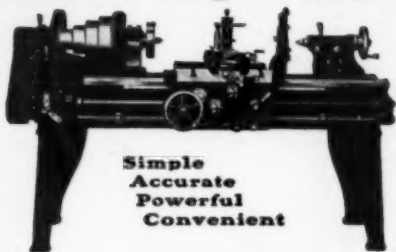
*A safe offer for you, for we protect you  
The quality of the Engine protects us*

## **The Elyria Gas Power Co.**

**Elyria, Ohio**

Also builders of "The Little BIG ENGINE" for Natural & Producer Gas

## Standard Engine Lathes



Furnished with either standard cone or with 3-step cone double-back-geared, **carrying a wide belt**, with 18 spindle speeds and wide feed range.

**GREAVES, KLUSMAN & CO.**  
Cincinnati, Ohio, U. S. A.

### Machine Tool Makers

should investigate carefully the facilities offered by **Hitchcock's Machine Tool List** for reaching this trade in all parts of the country. Its circulation is specialized to completely cover *every line of manufacture* in which machine tools are used—as well as all railroad and other tool-using shops—with a thoroughness and effectiveness not equalled by any other advertising medium.





# JUNK

**Men do not get the caps  
Of Tucker's Positive Lock  
Compression Grease Cups  
They Won't Jar Off**

For Automobiles and all kinds of machinery having excessive vibration. Cup member has internally milled threads to gauge limits, ensuring interchangeability. We are prepared to furnish the cup part in pressed sheet brass in the following sizes:

$\frac{3}{4}$  in., 1 in., and 1  $\frac{1}{2}$  in., all 24 pitch thread.

Complete Cups {	No. 000 {	$\frac{3}{4}$ in. pipe shank
	No. 00 {	1 in. pipe shank
	No. 0 {	1 $\frac{1}{2}$ in. pipe shank

PATENTED JANUARY 11, 1910

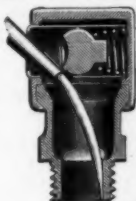
## Tucker's Oil Hole Covers



No. 5 Style B



Self Closing



Style C, Self Closing

Note the indent of ball valve on styles B & C

Style A



Send for Catalogue of full line of Covers  
for all kinds of machinery having oil holes

**W. C. & F. C. Tucker, Hartford, Conn.**

# The Curtis Oil Extractor

**A Sure Cost Reducer**



Using the oil 10 to 20 times instead of only once, cuts down your oil expense in a steady, sure way. In a few months the cost is returned, and then it's a clear saving that feels better in your pocket than the oil man's. Your choice of three sizes.

No. 400—Capacity: 2 Bushels

*Let me send details and prices of this simple, well built extractor—you'll like them*

**Albert B. Curtis**

25 Union St.,    :-    :-    Worcester, Mass.

In revising our manufacturing equipment, we find the following first class Used Machine Tools, which we offer at attractive prices:

## ENGINE LATHES

14x 6 Lodge & Shipley, q. c. g.  
14x 8 Cisco, q. c. g.  
16x 6 Lodge & Shipley, q. c. g.  
16x 6 Hendey, q. c. g.  
16x 8 Reed  
16x 8 Lodge & Shipley, q. c. g.  
20x 8 Lodge & Shipley, q. c. g.  
20x 10 Lodge & Shipley, q. c. g.  
20x 12 Lodge & Shipley, q. c. g.  
24x 8 Lodge & Shipley, q. c. g.  
25x 13 Sellers  
36x 12 Lodge & Shipley, q. c. g.

## SPECIAL LATHES

24 in. x 7 ft. Lodge & Shipley  
Chuckling Lathe.  
No. 3 Lodge & Shipley Rapid  
Reduction Lathe.

## METAL SAWS

No. 3 Nutter-Barnes Cold Saw  
Franklin Cold Saw, 3½ in. Cap.  
Globe Power Hack Saw, 8 in.  
Capacity.

## MISCELLANEOUS

12x40 in. Mumford Molding Machine.

*Write for complete description with prices of machines  
in which you are interested*

**The Lodge & Shipley Machine Tool Co.**

CINCINNATI, OHIO, U. S. A.

**What's That?**  
**Oil Separator!**

**Yes, Here's Last Months'**

**Oil Bill**

---

Efficiency begins with economy  
and the saving in oil will pay for  
the machine in a short time and  
then a continuous profit for years.

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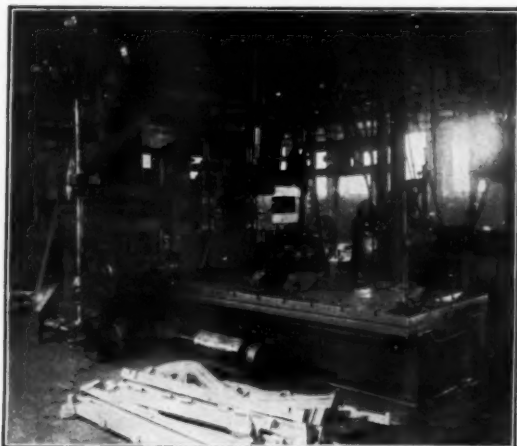
*The Manufacturers only make one profit*

**The American Tool & Machine Co.**

**Incorporated 1864**

**BOSTON**

**At 1-3 of Cost**  
**Planer Type Milling Machine**  
**Condition First Class**



**Four spindles.**  
**Each spindle independently adjustable.**  
**Maximum width between cutters 60 inches.**  
**Maximum distance vertical spindles to top of table 36 inches.**  
**Table 54 in. wide, 125 in. between pockets.**

*Send for photos and detailed description.*  
*Can be seen under belt.*

**Chandler & Farquhar Company**  
**Boston, Mass.**

**New**  
**AND**  
**Slightly Used Machinery**  
**AT**  
**Attractive Prices**

**New**

- 15 in. x 6 ft. Rockford Lathe.
- 18 in. x 8 ft. Rahn-Larmon Lathe.
- 24 in. Queen City Back Geared Shaper.
- No. 2 Owen Plain Milling Machine.
- No. 3 Owen Plain Milling Machine.
- No. 3 Owen Universal Milling Machine.
- 2½ in. Dreses Screw Machine.

**Slightly Used**

- 28 in. x 12 ft. American Loose Change Gear Lathe.
- 24 in. x 12 ft. American Planer.
- 26 in. x 12 ft. American Planer.
- 30 in. x 10 ft. Heavy Pattern American Planer.
- 36 in. x 12 ft. Heavy Pattern American Planer.
- 4 ft. Bickford Plain Radial Drill.
- 5 ft. Western Plain Radial Drill.
- 6 ft. Bickfork Plain Radial Drill.
- 6 ft. American Full Universal Radial Drill.
- American Hand Milling Machine.
- No. 3 Cincinnati Universal Milling Machine.
- No. 7 American Screw Machine.
- Brown & Sharpe Plain Grinding Machine, capacity 12 in. Diameter.
- Wais & Roos 100 lb. Hammer.

**The American Tool Works Co.**  
**Cincinnati, U. S. A.**

**If You Want to Buy or Sell  
Second-Hand Machinery**

**Or if you have any for sale**

**Ask**

**Buffalo Tool & Supply Co.**  
**40 Henry St., Buffalo, N. Y.**

What they can do for you.  
They are equipped to make it interesting.

**Steel Die  
Embossed Stationery**

looks like solid prosperity. The psychology of creating a favorable impression by mail must necessarily include impressive stationery—neither cheap nor showy—just neat and rich. For that purpose our Steel Die Embossed Stationery is unsurpassed.

*It is probably not as expensive as you think  
Ask for free Specimen Book and Prices*

**American Embossing Co.**  
**192-96 Seneca St., Buffalo, N. Y.**

# The Shop Was Sold Entire

**J. J. McCABE**

makes another important announcement about some of the very best of Tools that thousands of shop men want.

*Some of these Machines still under belt—in actual operation*

**All of Them at Low Prices—to Close Them Out at Once**

## **Upright Boring Mills.**

- 20' Niles, extension 14', double head, motor driven.
- 7' Sellers & Co's.
- 6' Pond, two heads.
- 34' Bullard, two heads.
- 3' Bullard, two heads.
- 24' Bullard, turret head.

## **Turret Lathes.**

- 26"x16' Bullard, triple geared.
- 22" Potter & Johnston, double.
- 20" Rogert, friction head.
- 2"x24" Jones & Lamson, slid. hd.
- Smaller sizes of Turret Lathes.

## **Radial Drills.**

- 6' Speed box, Bickford.
- 6' Plain, Pond.
- 54' Plain, Prentice Bros.
- 5' Speed box, Bickford.
- 5' Plain, Prentice Bros.
- 44' Niles, half universal.
- 4' Speed box, Prentice Bros.

## **Hor. Boring & D. Machines.**

- 32" bar, Bement-Miles, heavy, with facing head.
- 27" bar, Bement.
- 24" Floor type, drilling & tapping.
- 2" bar, Garvin.

## **Planers.**

Over 50—All Sizes.

- 134"x26' Pond M. T. Co. (Plainfield) 4 heads, motor driven, still running.
- 84"x16' Niles Tool Works, 3 heads.
- 76"x14' Pond Machine Tool Co., 2 heads.
- 72"x28' Wm. Sellers & Co's., 4 heads.
- 72"x14' Niles Tool Works, 4 heads, motor.
- 56"x16' G. A. Gray Co., 2 heads.
- 48"x12' Detrick & Harvey, open side.
- 42"x10' Pond, 2 heads.
- 36"x 8' Detrick & Harvey, open side.
- 36"x10' Pond, 2 heads.
- 36"x 8' Pond, 1 head.
- 28"x 6' Pond, 1 head.

## **Lathes.**

- 72-48"x14' Harrington, gap, extension bed blocks 68-92".
- 60"x10' New Haven.
- 56"x16' Putnam.
- 52"x28' Putnam, heavy pattern.
- 50"x18' Putnam.
- 48"x24' Fitchburg, blocks 66".
- 38"x26' Putnam, blocks 53".
- 36"x16' Pond.
- 30"x14' Johnson.
- 30"x10' Pond.
- 26"x12' Blaisdell.
- 24"x10' Pond.
- 22"x12' Putnam, blocks 34".
- 18"x10' Sch. & Boye, quick change.
- 16"x 6' Hendey.
- 14"x 6' Reed.

## **Miscellaneous.**

- Gear Cutter, 26" Brown & Sharpe.
- Gear Cutter, 30" Gould & E.
- Slotter, 16" Bement.
- Slotter, 12" Bement.
- Milling Machine, vertical, B. & S.
- Milling Mach., plain, 60" table.
- Milling Mach., heavy m'frs. style.
- Steam Hammer, 700 lbs. Bell.
- Steam Hammer, 400 lbs. Erie.
- Pipe Machine, 10" Jarecki.
- Pipe Machine, 4" Philadelphia.
- Bolt Cutter, 14" Acme.
- Bolt Cutter, 14" Landis.
- Shaper, 26" American.
- Shaper, 15" Prentiss.
- Multiple Drills, 14 and 8 spindles.
- Upright Drills, 50 to 20" swing.

**J. J. McCABE, - 30 Church St., New York**

# THE E. L. ESSLEY MACHINERY CO

555-557 WASHINGTON BLVD CHICAGO  
222 GRAND AVE MILWAUKEE

## Drills.

- |                                              |                                           |
|----------------------------------------------|-------------------------------------------|
| 4 spindle Dwight-S sensitive drill.          | 23 in. Bickford, b. g., w. & l. feed.     |
| 4 spindle Quint turret drill.                | 26 in. Blaisdell, sl. hd., w. f.          |
| 6 spdl. No. 3 Garvin, mult., table fd.       | 26 in. Bickford, heavy type, b. g., w. f. |
| 20 in. S. & W., sq. base.                    | 24 in. Aurora, sta. head, b. g., p. f.    |
| 18 in. Baker Bros. high speed.               | 26 in. Barnes sta'y hd., b. g. and p. f.  |
| 23 in. Barnes Sr., st. hd., b. g. p. f. (3). | 28 in. Lodge & D., sl. hd., b. gd., p. f. |
| 24 in. Hamilton, sl. hd., b. g., p. f.       | 34 in. Barnes sl. hd., b. g., p. f.       |
| 26 in. Bickford, st. hd., b. g.              | 2 ft. American, sensitive radial.         |
| 21 in. Hamilton, b. g., p. f.                |                                           |

## Engine Lathes.

- |                                     |                                        |
|-------------------------------------|----------------------------------------|
| 15x6 Walcott, back geared, rebuilt. | 18x10 Putnam.                          |
| 16x6 Muller, b. g., p. c. f.        | 20x12 LeBlond, p. r., h. s.            |
| 16x6 Springfield, c. r., p. c. f.   | 22x11½ New Haven, c. r.                |
| 16x7 Springfield, c. r., p. c. f.   | 24x12 Schumacher & B., c. r., p. c. f. |
| 18x8 Blaisdell, c. r., h. s.        | 30x16 Schumacher & B., comp. rest.     |
| 18x10 Blaisdell, plain rest.        | 30x17 Gleason, pl. r., p. c. f.        |

## Miscellaneous Lathes.

- |                                                                                |                                                            |
|--------------------------------------------------------------------------------|------------------------------------------------------------|
| 30 in. x 8 ft. P. & W. p. hd. chucking lathe, 24 in. 4-j. chk., p. f. to t. s. | Pearson b. g. hub machine, like turret lathe, 2½ in. h. s. |
| 13 in. Gisholt, standard turret, comp.                                         | 22x7 Lodge & D., turret, bk. gd.                           |

## Planers.

- |                              |                                                |
|------------------------------|------------------------------------------------|
| 27x27x 8 Ames.               | 20x50 Pedrick & Ayer, travel. head, open side. |
| 24x24x 6 L. W. Pond, 1 head. |                                                |
| 30x30x16 Hamilton, 2 heads.  |                                                |

## Screw Machines—Turret Lathes.

- |                                        |                                                                   |
|----------------------------------------|-------------------------------------------------------------------|
| 2 in. Cleveland automatic.             | 18 in. Lodge & D., b. g., p. f. to turret slide, 2 in. w. f. cap. |
| No. 3 Foster-K. pl. hd., 1½ in. cap.   | 2 in. x 24 in. Jones & L. flat turret, cone head, fine order.     |
| No. 2 Warner & S., pl. hd., w. f., 4". |                                                                   |
| No. 1 Pratt & W. screw machine.        |                                                                   |

## Miscellaneous.

- |                                                  |                                                                                          |
|--------------------------------------------------|------------------------------------------------------------------------------------------|
| Blower, No. 4 Sturtevant, 7 in. out.             | Hammer, 100 lb. No. 4 Beaudry, belt.                                                     |
| Blower, 30 in. Buffalo, 5½ in. outlet.           | Keyseaters, No. 1 Morton, 18 in. stroke, (2).                                            |
| Blower, No. 6 Boston & Co., S.                   | Keyseat miller, J. T. Burr.                                                              |
| Bolt cutter, 1 in. National, dbl. hd.            | Miller, American hand.                                                                   |
| Bolt cutter, 1½ in. Nat'l. sgl. hd.              | Miller, No. 5-B Becker-B, plain.                                                         |
| Bolt cutter, 1½ in. Adams, single.               | Miller, No. 3 Garvin, plain.                                                             |
| Boring mill, 30 in. Bullard, 3 j-ck.             | Miller, No. 2½ Garvin, plain, b. g.                                                      |
| Boring mill, 37 in. Bridgep't, 2 hds.            | Miller, No. 2 Kearney & Trecker, back geared, plain.                                     |
| Boring mill, 52 in. Rogers & Hemp-hill, 2 heads. | Pipe mche., 4 in. Borden, complete.                                                      |
| Boring mill, 30 in. Colburn, 3j. ck.             | Punch and shear, No. 2 Colton, double end. 20 & 8 in. throats, capacity 4x1½ in. rounds. |
| Boring mill, 51 in. Niles, 2 hds.                | Punch press, No. 6 Consolidated, o. b. i., 3 in. stroke, not geared, new.                |
| Boring mill, 60 in. Niles, 2 hds.                | Punch press, No. 4 V. & O., straight-sided, 2 in. stroke, 31" bet. uprights.             |
| Cold saw, No. 4 Keystone, 4½ in.                 | Riveter, ½ in. Shuster.                                                                  |
| Cutting-off mach., 2 in. Hurlbut & R.            | Roll threading mche., Rudolphi & K.                                                      |
| Gas furnace, No. 1 Westmacott.                   | Squaring shear, 50 in. power.                                                            |
| Gear hobbars, Reynolds (2).                      | Shear, 10 ft. Niagara, No. 1120.                                                         |
| Grinder, Gisholt universal tool.                 | Tapper, No. 1 Garvin, vertical.                                                          |
| Grinder, disc, No. 4 Besly, 18 in.               | Toggle press, 10 ft. Robinson.                                                           |
| Grinder, plain. Brown & S., 12x18 in.            |                                                                                          |
| Grinder, No. 3 Brown & S.                        |                                                                                          |
| Grinder, 20x3 Diamond, single wet.               |                                                                                          |
| Grinder, Greenfield, tap and die.                |                                                                                          |
| Hammer, 25 lb. Justice, belt.                    |                                                                                          |



# Second Hand Machinery

72" Cincinnati Spur Gear Cutter, arranged for motor drive.

## Grinders.

No. 1 Cincinnati plain cutter and tool grinder.

No. 3 Brown & Sharpe universal cutter and tool grinder.

6"x32" Norton, plain.

10"x34" Thompson, universal.

12"x32" Landis, plain.

Springfield Brandes vertical grinding planer.

Gorton combination disc grinder, 18" disc wheel.

## Hammers.

600 lb. Bement, steam.

800 lb. Erie, steam.

800 lb. Ferris & Miles, steam.

1500 lb. Pittsburgh, steam.

## Lathes.

14"x 6' Whitcomb-Blaisdell, 3-step cone, compound rest.

15"x 6' Flather, rise and fall rest.

16"x 8' Lodge & D., c. r., hol. spdl.

17"x 6' Bradford, compound rest, raising blocks to swing 20".

18"x 8' Lodge & S., c. r., q. c. g.

18"x 8' Schumacher & Boye, c. rest, 3 step cone, taper att. and chuck.

18"x15' Whitcomb-Blaisdell, c. rest, 3 step cone, chuck.

20"x 8' Lodge & S. patent head, compound r., quick change gears.

22"x16' Pond, compound rest.

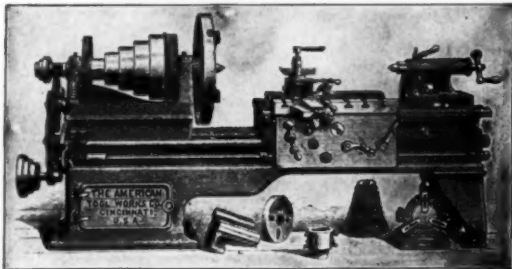
22"x16' Putnam.

24"x12' Bradford, c. r., taper.

24"x12' S. & B., c. r., 3 step cone.

26"x20' Sellers, compound rest.

## Sample of our Lathes



18-30"x8' American Gap Lathe, Compound Rest, Quick Change Gears, Good Condition.

## Turret Lathes.

15" Bardons & Oliver, auto. chuck.

16" P. & W., power feed to turret.

18"x6' Fox Monitor.

21" and 25" Gisholt heavy turret lathes, excellent condition.

25" L. & D., power feed to turret.

42" New Haven, heavy & powerful.

2" Warner & Swasey flat turret.

2"x24" Jones & Lamson flat turret.

1 1/2" Bardons & O. screw machine.

3/4" Garvin screw machine.

3/4", 1" Cleveland automatics.

We have Drills, Milling Machines, Planers, Shapers, Pipe Machines, Key Seaters, Bolt Cutters, etc.

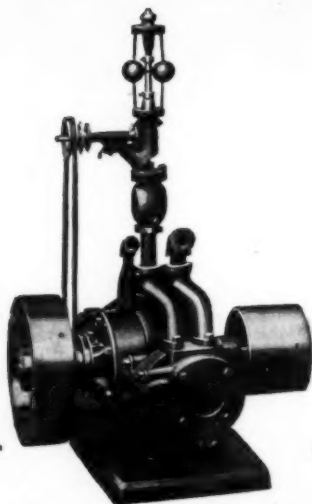
Send for our March List "Used Machinery" giving complete descriptions.

**Marshall & Huschart Machinery Company**

17 S. Jefferson St., Chicago.

334 N. Capitol Ave., Indianapolis.

915 Chemical Bldg., St. Louis.



## Small Portable Motor

**Ideal for Railway Repair Shops, Driving Valve Seat Planers, Portable Boring Bars, Drilling Machines, etc.**

This two cylinder engine is equal to an electric motor for quick work, and much more economical when steam or compressed air is available, using a pressure varying from 50 to 125 lbs. It is accurately balanced, running up to 400 r. p. m. with very little vibration.

All working parts are enclosed in an oil tight case, making it dust and fool proof. Fly wheel, pulley and governor can be quickly detached. Every detail is carefully worked out, making the motor a model of economy and durability.

*Get posted on this compact, effective engine, and many other big economizers—all fully described in our catalog*

**H. B. Underwood & Company**  
1022 Buttonwood St., Philadelphia, Pa.

## Second-Hand Machinery.

Lists of second-hand machinery, either for sale or wanted, will be published under this heading at the rate of **40 cents a line**, across the page, each issue, with a minimum charge of **\$4.00**. Sub-headings are counted as one line, but the name and address of advertiser are not included in the space charged for. Prices and full descriptions of the machines listed will be furnished by the parties offering them for sale. If you do not find what you require, use the slip inclosed with each book to make known your wants to the publisher.

### FOR SALE BY

**Wm. C. Johnson & Sons Machinery Co.,**  
**210-212 Washington Ave., St. Louis, Mo.**

Here are three exceptional bargains:

#### CYLINDER BORING MACHINE.

6' Niles horiz. Corliss engine cylinder boring machine for boring cylinder, two ports and facing both ends of cylinders at one setting and operation.

#### BORING AND TURNING LATHE.

30' Pit lathe for boring and turning fly-wheels, band wheels and rope wheels.

#### ELECTRIC CRANE.

40' span 25-ton electric traveling crane three motors, 220 volts, d. c.

### FOR SALE BY

**Chas. Molitor Machinery Co.,** **215 S. Clinton St. Chicago, Ill.**

Air compressors.

Air riveters and presses.

Beam shear.

Bolt and pipe threaders.

Car wheel boring machine, 50"

Circle shear, 48" Niagara.

Crane derricks.

Drill press, 3 spindle, heavy.

Gap shear.

Grinder, disc, 18", modern.

100 other iron and woodworking machines, motors, etc., etc.

Grinder, universal, No. 1 B. & S.

Hammers, drop and trip.

Lathe, 24"x8' Lodge & Shipley.

Miller, No. 6 Garvin.

Nut tappers, 6-spdl., modern, (2).

Punch press, geared, No. 5 Am. Can.

Punches and shears, heavy.

Screw machine, 14" P. & W., latest.

Wire straightener and cutter, 14"

Shuster automatic.

### FOR SALE BY

**The Columbus Machine & Tool Co.,** **Columbus, Ohio.**

Real Bargains:

Available for immediate delivery at prices which will move them quickly.

Boring mill, 14'-20' Niles vert. extension, with extension boring hd., belt dr.

Engine, steam, 11 & 18x14 Columbus heavy duty tandem compound, automatic cut-off.

Engine, steam, 11x18 Brownell, side crank, automatic cut-off.

Engine, special electric gas engine, 25 h. p., direct connected to Crocker-

Wheeler 115-volt generator.

Traveling cranes, jib and hand—a number of.

Water heater, 80 h. p. Brownell, open feed.

### FOR SALE BY

**The Oesterlein Machine Co.** **Cincinnati, Ohio**

Centering machine, Whiton, two spindle, 1/2 to 4", 3 jaw chuck.....\$ 60.

Drill press, upright, 28"x4' 8" back geared..... 100.

Drill press, pulley, Striet, 9 1/2" arm, takes up to 60" pulley..... 35.

Gear cutter, Gould & Eberhardt automatic, 22"x5", with oil pump..... 325.

Grinder, Brown & Sharpe No. 14, takes 10"x48"..... 650.

Lathe, 14"x6' screw cutting, with 8" universal chuck..... 100.

Lathe, 18"x7' screw cutting, takes 48" between centers..... 85.

Lathe, 18"x10' Dietz, Schumacher & Boye engine lathe, 16" chuck..... 200.

Lathe, 30"x12' engine lathe..... 225.

Milling machine, Oesterlein No. 24, plain..... 490.

Planer, Lodge & Davis, 30"x30"x8'..... 500.

Screw machine, 2" Cleveland Automatic, 5-hole turret..... 400.

## SECOND-HAND MACHINERY

### FOR SALE BY

**The Motch & Merryweather Machinery Company,**

**707-715 Lakeside Av., N. W.,**

**Cleveland, Ohio**

**Branches: Detroit, Cincinnati, Pittsburgh.**

Below we give a partial list of machinery in stock. Our latest illustrated issue of "Machine Tools" giving a complete description of our stock may be had for the asking. We buy only the best. Delivery is immediate.

#### BORING MILLS.

- 20" Bullard, swivel turret head.
- 72" Pond, very good condition.
- 42" Bullard rapid production, double head, A1.
- 42" Bullard, swivel turret head and plain head, very good.
- 51" Bullard double swivel turret head, A1.
- 24" bar Binsse horizontal boring machine, good as new.
- 4" bar Bement-Miles horizontal, very good condition.
- 2" Lucas cone drive column type horizontal.

#### DRILL PRESSES.

- 21" Davis bk. grd. power fd. good.
- 3 spdl. Rockford 20", back geared, power feed, first class.
- 28" Rockford, s.l. hd., good as new.
- 32" Pond, old type, good.
- 4-spindle Garvin, geared, very good.
- 8-spindle Gardam, good, belt drive.

#### DRILLS—RADIAL.

- 36" Dreses, latest model, swivel table, gr. drive, first class condition.
- 4' Prentice, cone dr., good condition.
- 4' Fosdick, with 5 ft. arm, tapping attach., first class, gear box drive.
- 5' Pond (2), in very good condition.

#### GRINDERS.

- No. 60 Heald cyl. grinder, first class.
- 10"x66" Landis, plain, very good.
- No. 14 Landis, internal, very good.
- No. 3 Landis, universal, very good.
- No. 3 Landis, plain, very good.
- 21"x96" Landis univ. first class cond.
- 18"x96" Norton plain, latest design, first class, arranged for motor dr.

#### GEAR CUTTERS.

- 36" G. & E., spur and bevel, very good condition.
- No. 2 Dwight Slate, cap. 8"x4", 12 d.p.
- 26" Brown & S., very good cond., (2).
- 48" Gould & E., first class condition.
- 64" Gould & E., very good condition.
- 40" Flather, first class condition.
- 20"x8"x5" d.p. Rehanania, first class.

#### LATHES.

All sizes from 10 in. to 60 in. swing always in stock.

#### PLANERS.

- 15" Bush crank planer.
- 22"x22"x8" Gray, sgle. hd., first class.
- 24"x24" Powell, sgle. hd., gd. as new.
- 26" New Haven single head, good.
- 26" Gray, single head, first class.
- 36"x26"x8" Sellers, sgl. hd., good.
- 48"x48"x16" Detrick & Harvey, open-side, two heads, first class.

#### MILLING MACHINES.

- No. 2 B. & S. plain, first class.
- 24"x8" Ingersoll slab miller.
- No. 5 B. & S. plain, very good.
- No. 3 Cincinnati, pl., belt fd., good.
- No. 3 Cincinnati, univ., belt feed, comp. with dividing hd, first class.
- Garvin & Fitchburgh pl. Lincoln type, good.

#### SHAPERS.

- 16" Flather, gear box drive, down feed to head, first class.
- 20" Hendey, friction, first class.
- 20" Queen City, bk. gd., first class.
- 24" Hendey, later type, very good.
- 24" S. & M., latest type, first class.
- 24" G. & E., b. g. crank, very good.
- 26" Cincinnati, shifting belt.
- 26" Queen City, back geared crank, good as new.

#### TURRET LATHES AND SCREW MACHINES.

- No. 2 Bardons & Oliver, very good.
- No. 4 Pratt & Whitney, double back geared, fair condition.
- 2"x24" Jones & Lamson, sliding head, very good condition.
- No. 4 B. & O. swings 18", cross feed to turret, first class.
- 21" Gisholt, latest model, excellent condition.
- 21" Gisholt, old type, very good condition.
- 24" Gisholt turret lathe, late type, first class.
- 24"x24" Davis chucking machine, first class.
- 24"x16" Lodge & Shipley screw machine, very good.

## SECOND-HAND MACHINERY

### The Motch & Merryweather Machinery Company—Continued.

#### MISCELLANEOUS.

Bolt cutter, 2-spld. 2" Acme, complete, late type, first class cond.  
Bolt cutter, 1" Wells, good as new.  
Pipe mach., 6" Saunders, good as new.  
Pipe machine, 12" Curtis, first-class.  
Punch and shear, hand.

Planer, portable, 40" stroke, Morton, very good.  
Punch and shear, 1"x14"x12" throat, Cleveland.  
Tapper, Pratt & Whitney, good.  
Tire welding hammer, Williams-W.

#### FOR SALE BY

### The Cordesman-Rechtin Co., 215-219 Butler St., Cincinnati, Ohio

Will sell following tools in order to readjust our shop equipment. All are in good condition and may be seen in operation.

#### DRILLS.

24" Cincinnati, taper attach.  
26" Bickford.  
28" Bickford.

4" Bickford radial, plain.  
4" Universal Radial Drill Co., plain radial.

#### LATHES.

15"x 6' Lodge & Davis, chuck.  
16"x 6' Von Wyck, with chuck.  
16"x 8' Lathe & Morse, with chuck.  
18"x 8' Mueller, with chuck, (2).  
18"x12' New Haven, with chuck.  
20"x10' Lathe & Morse, with chuck.  
26"x14' New Haven, with chuck.

Fox special lathe.  
60" Lodge & Barker gap lathe.  
30" Streit pulley turning lathe.  
Streit pulley boring lathe.  
2" bar lathe. Jones & Lamson, turret and chucks.

#### PLANERS.

28"x28"x 7' Smith & Silk.  
28"x28"x 8' Bogart.

40"x36"x 8' New Haven.  
40"x36"x12' New Haven.

#### MISCELLANEOUS.

Grinder, double emery, for castings.  
Shaper, 18" Hendey, with chuck and countershaft.

Grinder, water tool.  
Time clock, Dey, 100-men, 7-day, nearly new.

#### FOR SALE BY

### Stiles-Morse Co., 565 W. Washington Blvd., Chicago, Ill.

#### LATHES.

24-48"x10'-12'-14' Rahn-Larmon extension gap lathe.  
24"x10'-12'-14'-16' Rahn-Larmon, Series "D".  
20"x10' and 12' Rahn-Larmon, Series "A".  
18"x8' and 10' Rahn-Larmon, Series "A".  
16"x6'-8'-10' Rahn-Larmon, Series "A".  
14"x6' second-hand speed lathe, countershaft and slide rest, \$55.

#### DRILLS.

10" Stecher bench drill.  
Guarantee high speed drill.  
20" wheel and lever drill.

24" back gd., power fd. and a. s.  
42" Blaisdell, b. g., p. f., \$250.  
4" Bickford radial, second-hand.

#### PLANERS.

30"x24"x 6' one head, second hand.  
30"x30"x10' one head, second hand.

36"x36"x13' one head, second hand.  
72"x42"x26' two hds., second hand.

#### PUNCH PRESSES, SECOND-HAND.

No. 1 small horn press, 1 1/2" stroke.  
No. 2 Consolidated, 2" stroke.

No. 3 Consolidated, o.b.i., 2 1/2" str.  
No. 3 Walsh, o.b.i., 3" stroke.

#### NEW PRESSES.

No. 18 to No. 21 Bliss, o.b.i., inclusive, assortment of strokes.  
No. 0 to No. 4 Stiles, solid back, inclusive, assortment of strokes.  
Double action presses, foot presses, double seamers, shears, and full line of drawing presses. Ask for Catalogue.

#### MISCELLANEOUS.

Miller, No. 1 1/2 Garvin, univ., good.  
Miller, No. 2 Cincinnati, univ., A-1.  
Miller, No. 2 Oesterlein, plain.  
Miller, No. 3 Aurora, plain, \$350.

Screw machine, 1" W. & S., A-1.  
Screw machine, 1 1/2" W. & S., A-1.  
Sq. shear, 22" Niagara, A-1, \$18.  
Turret lathe, No. 21 Gisholt.

## SECOND-HAND MACHINERY

### FOR SALE BY

**Joseph T. Ryerson & Son, - 16th and Rockwell Sts., Chicago**

#### PLANERS.

Item.		
H927	Gray 24x24x6, 1 head.	H169 Sellers, 42x42x8½, 2 heads.
H167	Sellers, 42x42x6½, 2 heads.	H946 Lodge & Davis 36x36x8, 1hd.

#### LATHES.

H793	Prentice 9x4 hollow spindle, compound rest, chuck.
H767	11x3½ speed lathe, turret slide, cut-off slide.
H902	Bradford 14x6 hollow spindle, compound rest, chuck.
H966	Flather 14x6 tool room, collet and taper attachment.
H804	LeBlond 14x8 hollow spindle, compound rest.
H848	Porter 16x6, plain rest, chuck.
H997	American 16x10 gd. head, q. c. g., taper attachment.
H932	Reed 18x8, hollow spindle, plain rest.
H945	New Haven 26x24, swings 28½.
H921	Lodge & Davis 22x16 hollow spindle, plain rest.
H920	Niles 60" pulley lathe, 2 compound carriages.
H859	Flather 24x10, q. c. g., hollow spindle, compound rest, chuck.
H838	Putman 32½x16, solid spindle, compound rest.

#### DRILLS.

H517	Snyder, 25 in. adj. head.	H926	Niles 4 ft. radial.
H610	Dallett No. 3, port. rope dr.	H961	Blaisdell 24 in. adj. head.
H832	Dwight-Slate 4 spdl. sens.	H962	Snyder 32 in. adjustable hd.
H864	Quint 6 spindle turret head.	H972	Prentice 28 in., geared feed.
H892	Cincinnati 20 in. lever feed.	H974	Henry & Wright 1 sp. sens.
H915	Niles 5 ft. radial, semi-univ.	H992	Rockford 24" tp'g. att.
H916	Lodge & Davis, 32 in., adj. hd.	H995	Cincinnati 28" tp g. att.

#### GRINDERS.

H971	Blount No. 2 cabinet base, takes 2, 10" wheels.
H889	Yankee style B, capacity ½ to 2½" drills.
H812	Landis No. 1 universal, range 9x24.
H811	Brown & Sharpe No. 3 cutter and reamer grinder.
H976	Besley No. 10 double disc grinder with clamp.
H802	Cincinnati No. 2 universal tool grinder with 220 v., d. c. motor.

#### PNEUMATIC TOOLS.

H605	Albree toggle, 26 in. reach, capacity 1 in. rivets.
H909	Blaisdell 10-16x10 cross compound compressor, belt drive.
H857	Allen riveter, 25 in. reach, 15 in. gap, capacity 1½ in. rivet.

#### MILLING MACHINES.

H665	Ingersoll, slab 36x36x8.	H737	Kempsmith No. 2 plain.
H636	Garvin No. 4 plain, 3 feeds.	H964	Osterlein plain, 34x9x19.
H658	Lincoln type, 6x26 in.	H940	Davis & E., No. 4 univ.

#### TURRET MACHINERY.

H958	Cleveland ½ in. automatic screw machine.
H655	Pratt & Whitney ½ in. hand screw machine.
H795	Wells No. 140, ½ in. hand screw machine.
H720	Jones & Lamson 2x24 turret lathe.
H744	Springfield Fox 18x6, turret on bed.
H953	Gisholt 21 in. turret, 2 in. hole in spindle.
H914	Conradson 24-32 turret lathe.

#### MISCELLANEOUS.

H918	Boring mill, 50 in. Niles., 2 heads.
H213	Boring and drilling machine, horizontal, 4x27x60 in., Beaman & Smith.
H927	Crane, hand power, 5 ton capacity, 18 ft. span.
H672	Cutting-off machine, 3 in. Hurlburt & Rogers.
H913	Cut-off saw, No. 3-B., capacity 20 in. beams.
H951	Flue welder, Hartz roller, capacity 4 in.
H893	Gear cutter, 36 in. Brainard, semi-universal.
H837	Keyseater, No. 0 Colborn.
H208	Profiling machine, No. 2 Pratt & Whitney.
H952	Saw grinder, 20 in. Higley.
H647	Screw machine, hand, ½ in. Pratt & Whitney.
H960	Steam hammer, 400 lb. Chambersburg.
H623	Tapping machine, No. 1 Garvin automatic.

## SECOND-HAND MACHINERY

### FOR SALE BY

**C. C. Wormer Mach'ry Co., 94-96 W. Woodbridge St., Detroit, Mich.**

Send for our No. 97 Catalog.

#### PLANERS.

30"x30"x14' Miles.	24"x24"x 7' New Haven.
31"x31"x 9' Brettell.	24"x24"x 6' Hendy.
28"x28"x 6' Pond.	17"x17"x 4' Whitcomb.
24"x24"x 6' Flather.	10"x10"x30' Federal bench.

#### DRILL PRESSES.

3-spd. 17" Barnes.	31" Barnes, sliding head.
3-spd. 14" Woodward & Rogers.	28" Snyder, sliding head.
3-spd. 12" Woodward & Rogers.	30" Thayer, sliding head.
6-spd. No. 1 Foote-Burt.	26" Barnes, sliding head.
3-spd. 16" Fox.	20" Stevens.
4-spd. 14" Gardam.	20" Davis.
10" Barnes, friction.	No. 14 Canedy-Otto, post.

#### GRINDERS.

No. 2 Diamond, wet.	Fellows gear cutter.
No. 6 $\frac{1}{2}$ Diamond, wet.	No. 12 Norton, double end.
No. 164 Wells, cutter & reamer.	No. 2 $\frac{1}{2}$ Northampton, double end.
No. 24 Landis, crank.	No. 14 Gardner, disc.

#### PRESSES.

No. 141 $\frac{1}{2}$ Stiles & Parker, square horn.	No. 2 Stiles & Parker.
No. 119 Standard, o. b. i.	No. 30-A Model B. Perkins, o. b. i.
No. 31 Toledo.	No. 5 Eaton, o. b. i.
No. 53 Fowler, fly wheel.	No. 2 Niagara, foot.

#### MILLING MACHINES.

No. 59 Bement & Dougherty, plain.	No. 2 Davis & Egan, plain.
No. 2 Cincinnati, plain.	No. 1 $\frac{1}{2}$ Grand Rapids, plain.
No. 1 Grand Rapids, plain.	No. 0 L. Blond, plain.

#### TURRET LATHES.

24" Davis.	24" Gisholt.
22" Gisholt.	No. 2 American, universal.
No. 4 Bardens & Oliver, plain.	20"x 8' Star Tool Co.
No. 2 Jones & Lamson.	21"x 7' Lodge & Davis.
16"x5' Fox.	No. 1 American, square arbor Fox.
No. 1 Warner & Swasey, universal.	18"x 6' American, bk. gd. Fox.

#### SCREW MACHINES.

8" Cleveland automatic.	8" Cleveland automatic.
4" Cleveland automatic.	No. 2 Pratt & Whitney, plain.
No. 3 Hartford automatic.	No. 1 Hartford automatic.
No. 2 Brown & Sharpe automatic.	No. 1 Brown & Sharpe, semi-auto.
No. 1 Foster-Kimball, wire feed.	No. 1 Pratt & Whitney.
16" Garvin, friction.	No. 1 American valve miller.

#### ENGINE LATHES.

9x44 Seneca Falls.	12"x 4' Dexter.
11"x 4' Mann.	13"x 6' Pratt & Whitney.
12"x 5' Reed.	14"x 6' Lodge & Davis.
15"x 6' Blaisdell.	14"x 6' Fay & Scott.
16"x 6' Pratt & Whitney.	15"x 6' Flather.
16"x 6' Porter.	16"x 6' Walcott & Wood.
18"x 6' Lodge & Davis.	16"x 6' LeBlond.
18"x 8' New Haven.	18"x 8' Whitcomb.
18"x10' Prentiss.	18"x 9' New Haven.
21"x10' Bradford.	19"x 6' Pond.
22"x10' Niles.	21"x11' Lodge & Davis.
26"x16' Schumacher & Boye.	22"x 8' Fineld.
28"x10' Hamilton.	22"x16' Putnam.

#### MISCELLANEOUS.

Beader, No. 1-A, P. S. & W.	Groover, 36" Niagara.
Boring mill, No. 0 Barrett.	Oil tank, 120 gal. Bowser.
Bulldozer, No. 0 Williams & White.	Pipe folder, 30" Niagara.
Cold saw, No. 5 Cochrane-Bly.	Profiler, 2-spindle, No. 1 Garvin.
Cutting-off mch., No. 2 Hurlburt & R.	Pulley lathe, 52x36" Stevens.
Cutting-off mch., No. 4 Hurlburt & R.	Rivet spinner, No. 80 Grant.
Groover, 36" No. 3 Niagara.	Slip rolls, 3x36 Niagara, dbl. gd.
Groover, 36" P. S. & W.	Wiring machine, No. 526 P. S. & W.

## SECOND-HAND MACHINERY

### FOR SALE BY

**The H. A. Stocker Machinery Co., 566-72 W. Randolph St., Chicago  
610 Merrill Building, Milwaukee, Wis.**

#### LATHES.

- |                                       |                                      |
|---------------------------------------|--------------------------------------|
| 14x6 Flather and Draper, comp. rest.  | 20x12 Draper, compound rest.         |
| 14x6 Hendy, comp. rest, q. c. g.      | 26x26 Bridgeford, compound rest.     |
| 16x6 Hendy, comp. rest, q. c. g.      | 30x12 Bradford, c. r. and chuck.     |
| 16x6 Prentice Bros., compound rest.   | 30x12 Flather, compound rest.        |
| 16x7 Pratt & Whitney, c. r. & taper.  | 32x44 Putnam, compound rest.         |
| 16x7 Blaisdell, comp. rest and taper. | 32x18 Pittsburg, d. b. g.            |
| 18x10 Economic, compound rest.        | 32x18 American, comp. r., q. c. g.   |
| 19x10 Cincinnati, compound rest.      | 42x18 Bridgeford, gd. hd., motor dr. |
| 20x8 Hamilton, q. c. g., comp. rest.  | 50x20 New Haven, compound rest.      |

#### SHAPERS.

- |                                      |                                      |
|--------------------------------------|--------------------------------------|
| 14 in. Flather, crank.               | 17 in. Economic, single grd. crank.  |
| 14 in. Rockford.                     | 18 in. Flather, single geared crank. |
| 16 in. Steptoe, single geared crank. | 22 Lodge & Davis.                    |
| 16 in. Walcott, single geared crank. | 28 Putnam.                           |

#### PLANERS.

- |                                         |                                     |
|-----------------------------------------|-------------------------------------|
| 22x22x5 Whitcomb, good order.           | 36x36x10 Niles, 2 heads.            |
| 26x26x8 Whitcomb, (new, reduced price.) | 36x36x12 Gray, 2 heads.             |
| 30x30x10 Flatner, 3 heads.              | 40x38x14 Putnam, old style, low pr. |
| 32x32x 8 Am. Tool Works, 1 head.        | 42x42x14 Detrick & H., open side.   |
| 36x30x12 Sellers, old style, low price. | 42x44x12 Pond, 2 heads.             |
|                                         | 48x48x20 Belmer, 4 heads, rebuilt.  |

#### GRINDERS.

- |                                              |                                                |
|----------------------------------------------|------------------------------------------------|
| No. 2 Landis, universal.                     | Nos. 1 and 2 Brown & Sharpe, surface grinders. |
| No. 14 Landis, plain.                        | No. 2 Walker, universal.                       |
| No. 1 Cincinnati, universal cutter and tool. | No. 2 Bath, universal.                         |
| 14x72 in. Norton, plain.                     |                                                |

#### MILLING MACHINES.

- |                                                                      |                                   |
|----------------------------------------------------------------------|-----------------------------------|
| No. 2 Hendy, b. g., plain.                                           | No. 13 Garvin, plain.             |
| No. 2 Kearney & Trecker, back gear, plain, with vertical attachment. | No. 5 Garvin, plain, back geared. |
| No. 4 Garvin profiler.                                               | No. 2 Brown & Sharpe, universal.  |
| No. 3½ Waltham, bench.                                               | No. 2 Cincinnati, universal.      |
| No. 3 Fox, plain.                                                    | No. 2 LeBlond, universal.         |
| No. 3½ Fox, plain.                                                   | No. 5B Becker, vertical.          |

#### UPRIGHT AND RADIAL DRILLS.

- |                                        |                                              |
|----------------------------------------|----------------------------------------------|
| 2½ ft. Fosdick National radial.        | 42 in. Barnes, geared feed.                  |
| 3 ft. Fosdick standard radial.         | 38 in. New H., sl. hd., bk. gr., p. fd.      |
| 5 ft. arm Western universal radial.    | 35 in. Blaisdel, sl. hd., b. g. & p. f.      |
| 5 ft. Bickford plain, gear box radial. | 28 in. Superior, b. g., p. f., auto. stop.   |
| 4 ft. Bickford plain, cone radial.     | 25 in. Prentice Bros., sl. hd., b. g., p. f. |
| 6 ft. Bickford radial.                 | 23 in. Barnes, b. g., fr. co. shaft.         |

#### POWER PRESSES AND PUNCHES.

- |                                       |                                                             |
|---------------------------------------|-------------------------------------------------------------|
| No. 36 Niagara, geared.               | No. 4 A Rudolph & Krummel deep throat press.                |
| Wold horn press.                      | No. 31 Toledo solid back press.                             |
| No. 30 Perkins, open back inc. press. | No. 1 Syversen solid back press.                            |
| No. 2 Rudolph & K., o. b. i. press.   | No. 3 Bliss "Stiles" geared punch.                          |
| No. 50 Crosby, open back press.       | Humphrey single end punch, 36 in. throat, cap. 1½ in. 1 in. |
| No. 44 E. Rudolph & Karch press.      |                                                             |
| No. 3A Bliss, toggle, 29 in. stroke.  |                                                             |

#### SCREW MACHINES AND TURRET MACHINES.

- |                                 |                                |
|---------------------------------|--------------------------------|
| No. 2 Pratt & Whitney.          | 4-½ in. Cleveland automatic.   |
| No. 2½ Pratt & Whitney.         | 4-½ in. Cleveland automatic.   |
| No. 4 B. & O. screw machine.    | 2x24 Jones & Lamson.           |
| No. 51 National-Acme automatic. | 3x36 Jones & Lamson.           |
| 64 in. Cleveland automatic.     | 14 Turret Lathes, small sizes. |

#### BORING MILLS—VERTICAL AND HORIZONTAL.

- |                                          |                                      |
|------------------------------------------|--------------------------------------|
| 37 in. Niles, 2 heads.                   | 34 in. Colburn, swivel turret.       |
| 42 in. Bullard, 1 swivel hd., 1 tur. hd. | 10 ft. Betts, 2 heads.               |
| 53 in. Colburn, 2 heads.                 | 10-16 ft. Niles, extension housings. |
| Fitchburg horizontal, 36 in. swing.      | 80 in. Pond, 2 heads.                |



## SECOND-HAND MACHINERY

### The H. A. Stocker Machinery Co., - Continued.

#### GEAR CUTTING MACHINES.

No. 3 Farwell hobbing machine.  
No. 0 S. & S. hobbing machine,  
spiral attachment.  
Reynolds hobbing machine.

72 in. Cincinnati, spur only.  
42 in. Gould & E., spur only.  
30 in. Flather, spur only.  
28 in. Brown & Sharpe, spur only.

#### MISCELLANEOUS.

Bolt cutter, 1½ in. Schlenker.  
Bolt header, ¾ in.  
Bulldozer, No. 5 Ajax.  
Centering machine, 4 in. Whiton.  
Cold saw, No. 4 Birdsboro, with six  
extra saws.  
Cutting-off mche., 5" Hurlbut & R.

Hammer, helve, 40 lb. Bradley.  
Hammer, drop, 500 lb. Standard.  
Hydraulic press, 40 ton.  
Hydraulic press, 100 ton, with pump.  
Pipe machine, 4 in. Saunders.  
Punch and shear, No. 5 L. & A.  
Riveter, 3-16 in. Adt.

### FOR SALE BY

**Western Machinery Co., 6th and Baymiller Sts., Cincinnati, Ohio.**

#### LATHES.

28"x12' Fifeild, 30" ck., c. r., \$ 600.00.  
26"x14' Lathe & Morse, \$ 325.00.  
24"x 8' Steptoe, pl. rest, \$ 235.00.  
24"x 8' Pratt & W., c. r., \$ 275.00.

22"x10' Niles, p. r., \$ 165.00.  
20"x14' G. A. Gray, \$ 275.00.  
18"x17' Lodge & Davis, \$ 325.00.  
About 15 Smaller Lathes.

#### DRILLS.

4' pl. U. R. D. radial, \$ 275.00.  
20' Davis b. g., p. l., \$ 72.50.

24' Lodge & D. slid. hd., \$ 65.00.  
24' Fitchburg, b. g., p. l., \$ 125.00.

#### MISCELLANEOUS.

Grinder, universal, No. 2 Cincinnati  
Milling Mch. Co., late type, \$ 300.  
Grinder, dbl. face, Diamond, \$ 85.  
Hack saw, 12" Sterling, motor  
driven, \$ 75.  
Pipe machine, 2" Jarecki.

Reducing press, No. 70 Bliss.  
Screw mch., ¾" Clevel'd auto., \$ 125.  
Speed lathes, \$25.00 to \$50.  
Steam hammer, 80 lb. Erie.  
Turret lathes, plain, 14", 16", 18"  
and 20", \$50.00 to \$75.

Large stock of other machine tools, machinery and supplies.

### FOR SALE BY

**Wm. C. Johnson & Sons Machinery Co.,**

**210-212 Washington Ave.**

**St. Louis, Mo.**

#### LATHES.

16"x 6' Lodge & Shipley.  
18"x 8' Hamilton.  
20"x 8' Blaisdell.  
22"x12' American.  
22"x16' American, quick change.  
24"x10' American.

26"x14' American.  
26"x15' Pond.  
32"x20' Pond.  
44"x16' Pond.  
60"x28' New Haven.  
24" Gisholt turret lathe.

#### PLANERS AND SHAPERS.

16"x16"x18" Crank planer.  
24"x24"x 6' American planer.  
26"x26"x 8' Lodge & Davis planer.

36"x36"x10' American planer.  
60"x60"x14' New Haven planer.  
28" Steptoe shaper.

#### DRILLS.

4' arm Fosdick radial.  
5' arm American full univ. radial.  
60" Bickford, goose neck.

28" American, sliding head.  
32" American, sliding head.

#### AIR COMPRESSORS.

8 x 8 belted.  
10x12 belted.  
10x12 Chicago, motor driven.

10x10x10 steam driven.  
960 cu. ft. Norwalk.

#### MISCELLANEOUS.

Bolt cutter, 1½" National.  
Bolt cutter, 3", quick opening head.  
Hammer, 80-lb. Veakley.  
Hammer, drop, 200-lb. Mossburg &  
Granville.  
Hydraulic press, 45" Elms.

Keyseater, No. 6 Morton.  
Punch, 23" throat, Pels, 1" in ¾".  
Saw, No. 16 Higley.  
Screw machine, ¾" Cleveland auto.  
Screw machine, 1½" P. & W. auto.  
Slotter, 16" New Haven.

## SECOND-HAND MACHINERY

### FOR SALE BY

**Niles-Bement-Pond Company, . 111 Broadway, New York.**  
**Located at Chicago, Boston and New York.**

Send for Catalogue No. 18.

#### LATHES.

- |                                       |                                        |
|---------------------------------------|----------------------------------------|
| 13x6 P. & W., r. & f., taper.         | 22x12 Niles, with taper.               |
| 14x5 American, brass, Fox att.        | 24x16 Niles, c. r.                     |
| 16x6 Pratt & Whitney geared head      | 26x12 Pond, comp. rest.                |
| tool room lathe.                      | 28x12 Pond, compound rest.             |
| 16x8 Reed, motor drive, 110 v., d. c. | 30x14 Niles, c. r.                     |
| 16x8 P & W., r. & f.                  | 32x12 Pond, compound rest.             |
| 16x8 Perkins, c. r.                   | 36x17 Pond, 220 v. motor drive, taper. |
| 16x10 P. & W., r. & f. & t.           | 36x18 Bement, comp. r., tri. grd.      |
| 18x5 Blaisdell, r. & fall.            | 36x28 Bement, comp. r., tri. grd.      |
| 18x6 Pond, turret tool post.          | 40x16 Bement, b.g., not screw cutting. |
| 18x7 Pond, turret tool post.          | 42x22 Niles, comp. r., tri. grd.       |
| 18x8 Flather, quick change.           | 42x30 Putnam, comp. r., tri. grd.      |
| 20x8 old style P. & W.                | 44 in. P. & W. pulley lathe.           |
| 20x10 Flather, c. r.                  |                                        |

#### SCREW MACHINES, TURRET LATHES, ETC.

- |                                         |                                              |
|-----------------------------------------|----------------------------------------------|
| 14x5 American, square arbor.            | 3 in. Hartford automatic pin machine.        |
| 19 in. B. & O. hand screw mch.          | 4 in. P. & W. automatic screw mach.          |
| No. 3, 2 1/2-16 in. Niles screw mche.   | 5 in. P. & W. 2 sp. automatic screw machine. |
| 2x24 Jones & Lamson.                    | 7 in. Acme old style 4-sp. automatic.        |
| 21 in. Gisholt, turret.                 | 7 in. single turret Spender automatic.       |
| 24-27 Conradson semi-automatic tur-     | 21-32 in. No. 2 Brown & Sharpe auto-         |
| ret, 2 3-16 in. hol. sp.                | matic screw machine.                         |
| 28 in. Milwaukee turret. 4 in. hol. sp. |                                              |

#### BORING MACHINES.

- |                                          |                                           |
|------------------------------------------|-------------------------------------------|
| 30 in. tur. hd. b. & t. mill, Colburn.   | 3 1/2 in. sp. Bement hor. bor. & drill.   |
| 50 in. Niles pulley borer.               | 4 in. sp. Betts, hor. bor. & drill.       |
| 7 ft. Pond b. & t., 2 heads.             | 96 in. swing x 10 ft. centers bor. & fac- |
| 8 ft. Pond b. & t., 2 heads.             | ing; weight: about 43,000 lbs.            |
| 10-16 ft. Niles, like new.               | 4 1/2 in. diam. spindle Niles floor bor-  |
| 14'-20' Betts extension, b. & t., 2 hds. | ing, drilling and milling machine,        |
| 2 in. sp. Kelly hor. bor. and drill.     | 17 ft. column travers.                    |

#### UPRIGHT AND SENSITIVE DRILLS.

- |                                          |                                            |
|------------------------------------------|--------------------------------------------|
| 13 in. 1 sp. sensitive, motor d., 110 v. | 30 in. sl. head, Gould & Eberhardt.        |
| 10 in. 2 sp. sensitive, Slate.           | 36 in. sliding head, Gould & E.            |
| 10 in. 3 sp. sensitive, Slate.           | 4 spindle Bement, multiple, 11 ft.         |
| 10 in. 3 sp. sensitive, Signourney.      | between housings.                          |
| 14 in. 4 spindle W. & R. sensitive.      | No. 11 multiple drill, P. & W.             |
| 2 spindle dbl. column sen., Langelier.   | 10 sp. adjustable R. & W., capacity        |
| 17 in. 4 sp. gang, Jones & L.            | 1 1/2 in. holes in 37 in. circles, belt or |
| 20 in. No. 23 Foote Burt high duty.      | motor; weight: 30,000 pounds.              |
| 28 in. sliding head, Pond.               |                                            |

#### RADIAL DRILLS.

- |                                   |                                     |
|-----------------------------------|-------------------------------------|
| 2 1/2 ft. semi-radial, Hiles & J. | 5 ft. plain, motor, Pond.           |
| 4 1/2 ft. semi-radial, Barr.      | 5 ft. 6 in. universal, Niles.       |
| 4 ft. Niles, plain.               | 6 ft. 10 in. semi-universal, Niles. |
| 4 ft. Niles, univ.                | 7 ft. 6 in. full universal, Niles.  |
| 5 ft. Niles, plain.               | Univ. portable radial, Prentice.    |

#### MILLERS AND GEAR CUTTERS.

- |                                        |                                    |
|----------------------------------------|------------------------------------|
| No. 1 Duplex Van Norman.               | 6x14 thread miller, P. & W.        |
| 24x7 table, plain, Becker.             | 30 in. spur gears, Gould & E.      |
| 43x9 1/2 No. 3 Cincinnati plain. b. g. | 36 in. spur gears, Pond.           |
| Single sp. profiler, 21x24 in. table.  | 48 in. spur gears, Brown & Sharpe. |
| Garvin.                                | 72 in. spur gears, Niles.          |
| P. & W. spline miller.                 | 84 in. spur gears, Niles.          |

#### SHAPERS AND SLOTTERS.

- |                                       |                                      |
|---------------------------------------|--------------------------------------|
| 10 in. crank shaper, P. & W.          | 18 in. crank shaper, Bement.         |
| 10 in. crank shaper, Miles.           | 32 in. triple grd. rack, Cincinnati. |
| 12 in. crank shaper, Bement.          | 12 in. crank slotter, Bement.        |
| 14 in. crank, Pratt & Whitney.        | 14 in. crank slotter, Niles.         |
| 18 in. double trav. head, Cincinnati. | 18 in. crank slotter, Bement.        |

## SECOND-HAND MACHINERY

### Niles-Bement-Pond Company—Continued.

#### RAILROAD MACHINERY.

46 in. car wheel lathe, Bement.

Niles double axle lathe.

Bement double axle lathe.

Putnam double axle lathe, ex. heavy.

79" wheel lathe, single quartering attachment, Niles.

90" ex. heavy wheel lathe, Niles, motor, with or without quartering att.

#### PLANERS.

22x22x6 Harrington.

24x24x6 Powell.

26x26x7 Niles, heavy type.

26x23x16 Miles, 2 hds.

30x30x6 Pond, 1 hd.

30x30x24 Sellers, 2 hds.

32x32x12 Pond, 2 hds.

32x32x14 Pond, 2 hds.

36x36x8 Niles, 1 head.

36x36x12 Pond, 2 heads.

36x36x20 Pond, 3 hds.

42x42x12 Woodward & P., 4 hds.

42x42x20 Miles, 3 hds.

48x48x16 Pond, 4 hds., heavy, 220 v. motor.

48x48x20 Sellers, 3 hds.

50x50x18 Gleason, 2 hds.

72x60x20 Niles, 2 hds.

86x86x35 Pond, 4 hds.

#### MISCELLANEOUS.

Bar cut-off saw, 16 in. diam. blade.

Bending and straightening machine, horizontal, for 10 to 15 in. beams and channels.

Cut-off machine, 2½ in. P. & W.

Cut-off machine, 4½ in. Starr.

Engines, 28 to 90 h. p.

Grinder, drill, 3 in. Sellers.

Grinder, plain, 5x32 in. Landis.

Grinder, univ., 10x20 Landis.

Grinder, 12x96 in. Springfield.

Grinder, tool, Gisholt.

Pipe machine, 6 in. Oster.

Saw grinder, automatic.

#### FOR SALE BY

**Enterprise Machy. Co., 523 Monroe St., Phone Main 1295, Chicago**

Brake, 8" Dries & K., power, 3-16", like new, cost \$800.....\$350.

Engine lathe, 14"x5" Flather, b. g., 10" ind. chuck, 1" h. s.....155.

Gas engines, 15 h. p., \$195; 12 h. p., \$120; 9 h. p., \$120; 5 h. p., \$85; 4 h. p., 95.

Miller, plain, 4½ Garvin, 9x48" table, b. g., 1½ arbor, div. head.....175.

Planer, 10"x6"x14", power, auto. feed, fine for small shop.....45.

Planer, 30"x24"x6" 4", 3 slots, 4 rows holes, good condition.....225.

Punch press, No. 3 R. & K. Am. Can. o. b. i., \$165; No. 2 same, new.....135.

Punch, geared power, b. g., ½" in ½", \$125; ½" in ¾", same.....95.

Screw machine, ½" LaVigne automatic, 12 collets, fine condition.....275.

Shaper, crank, 20" Kelly, fine condition, \$295; 14" American, crank.....195.

Steam engine, 50 h. p. Atlas, good condition, \$100; 5 h. p. American.....35.

Toggle press, 3½ Bliss, 10" drawing, double acting.....850.

And 400 more machines, all kinds, descriptions, prices, etc.

#### FOR SALE BY

**O. L. Packard Machinery Co.,**

**Milwaukee, Wis.**

#### LATHES.

14"x 6" Blaisdell lathe, solid spindle.....\$ 165.

14"x 6" Flather, hollow spindle.....200.

14"x 6" Hamilton, c. r., power cross feed, hollow spindle.....225.

18"x 6" American, compound rest, hollow spindle lathe.....250.

28"x20" Harris lathe.....300.

16" turret lathe.....150.

18" Lodge turret lathe, power feed.....125.

1" screw machine, Dreses, nearly new.....275.

#### MISCELLANEOUS.

Drill press, 26" Mechanics, sliding head.....\$ 125.

Keyseater, No. 2 Mitts & Merrill, modern, in good condition.....175.

Pipe machine, No. 8 Merrill.....275.

Planer, 24"x24"x5" Pond, two heads on cross rail.....550.

Planer, 25"x25"x16" Fitchburg.....450.

Screw machine, 4" Pratt & Whitney.....375.

Shaper, 2 spindle, wood top.....50.

Shaper, No. 2½ Clement, wood top.....125.

Shaper, Indiana, 2 spindle, no table.....70.

## SECOND-HAND MACHINERY

### FOR SALE BY

**The New Britain Machine Co.,**

**New Britain, Conn.**

Released Tools.

Owing to the consolidation of several plants in our new factory, we have the following duplicate tools for sale:

#### LATHES.

14"x6' Fitchburg, comp. rest, h. s.	16"x8' Bridgeport automatic thread-
15"x6' Pratt & Whitney, weighted	ing lathe.
carriage, r. & f. rest.	18"x10' Bullard, comp. rest, h. s.
16"x8' Prentice, r. & f. rest, hol. sp.	22"x20' Reed, comp. rest, hol. sp.
16"x10' patternmakers' lathe.	2x24' Jones & Lamson flat turret.

#### PLANERS.

24"x22"x5' Sault.	29"x29"x8' New Haven.
24"x24"x6' Powell.	

#### DRILLS.

Gang radial, 3/4' arm.	Snyder back geared power feed drill,
Adt radial, 2 1/4' arm.	28" swing.

#### MISCELLANEOUS.

Boring mill, horizontal, Western	Gear cutter, 18" Becker automatic.
Tool Works, 2 11-16" bar.	Oil separator, Curtis, with hoist.

### FOR SALE BY

**A. D. White Machinery Co., . 108-114 N. Jefferson St., Chicago**

#### LATHES.

13x5 P. & W., taper and chucks.	18x8 American, latest pat.
14x5 Reed, taper, 2 chucks.	20x10 American, q. c. motor drive.
16x6 Flather, 2 chucks.	22x16 Whitcomb, 3 step cone.
18x8 Schellenbach, q. change.	24x10 Springfield, chuck.
18x8 Whitcomb-B., s. pulley drive.	28x14 Fiffeld.
18x10 Schellenbach, q. change.	30x10 Powell.
18x12 Whitcomb-B., s. pulley drive.	32x14 Porter, 20 in. chuck.

#### DRILLS.

18 in. Blaisdell.	30 in. Bickford, sliding head.
23 in. Hamilton.	32 in. Bickford, sliding head.
28 in. Bickford, sliding head, (4).	32 in. Mechanics, like new.
30 in. Kerkhoff, sliding head.	3 ft. Bickford radial, cheap.

#### PLANERS.

24x 6 Gray, 1 head, (2).	32x 8 Betts, 1 head.
24x 6 Pond, 1 head.	36x10 Gray, 2 heads.
25x 6 Sellers, spiral drive.	36x12 Cincinnati, 2 heads.
26x 6 Gray, 1 head.	38x10 Gray, 1 head, fine.
26x 8 Gray, 1 head (2).	52x25 Betts, 1 head.
28x 8 Gray, 1 head (2).	

#### SCREW MACHINES AND TURRET LATHES.

18 in. No. 3 Pearson screw machine.	4 in. Cleveland, semi automatic.
No. 2 1/2 Pratt & Whitney sc. mche.	3 in. P. & W., automatic.
No. 3 Pratt & Whitney sc. mche.	13 in. Dreeses turret lathe.
4 in. Cleveland, automatic.	22 in. Gisholt, rapid traverse.
4 in. Pratt & Whitney, automatic (4).	24 in. Gisholt, rapid traverse.

#### PUNCH PRESSES.

No. 1 R. & K., o. b. l., (2).	No. 4 Stiles press.
Wold, open back.	No. 10 Thier inclinable.
No. 14 Norton, open back.	No. 68 N. Bliss, double action.
No. 19 Bliss inc., (2).	No. 15 Waterbury Farrel, geared.

#### MISCELLANEOUS.

Boring and facing machine, No. 1	Hammer, steam drop, 5000 lb. Eric.
Beaman.	Keyseater, No. 2 Catlin.
Gear hobber, No. 2 S. & S.	Keyseater, 16 in. Morton.
Grinder, cutter, H. G. Barr.	Miller, No. 1 B. & S. universal.
Hammer, power, 35 lb. Justice.	Pipe machine, 6 in. B. & K.
Hammer, power, 50 lb. Dienelt.	Shaper, 14 in. P. & W., univ. vise.
Hammer, drop, 200 lb. Norton.	Shapers, 16 in. Smith & Mills (2).

Did you get our new "Yellow Book."

## SECOND-HAND MACHINERY

### FOR SALE BY

**The Lake Erie Machinery & Supply Co., (Machinery Dept.)**  
**408-412 Frankfort Ave., N. W. Cleveland, Ohio.**  
 Revised list of Second Hand Machinery at reduced prices. Write for prices.

#### LATHES.

11"x 4' Star, milling att., 2 chucks.	20"x 8' W. & W.. q. c. fd., h.s., new.
14"x 6' Bradford, h. s., c. r., chuck.	24"x 8' American, h. s., c. r., chuck.
14"x 6' American engine lathe.	24"x 16' Gleason, plain rest, chuck.
15"x 6' Blaisdell, hol. spd., c. r.	24"x 26' New Haven.
16"x 5' I. Johnson, taper att.	24"x 28' Bradford shaft lathe, h.s., c.r.
16"x 8' Crane, plain rest.	32"x 22' Enterprise, raised to 40".
18"x 6' Blaisdell, tur. on carriage.	34"x 22' Enterprise.
18"x 8' Davis & E., b. g., c. r., h. s.	50"x 15' bull lathe.
19"x 6' Blaisdell, b. g., p. r., taper.	88"x 20' Niles bull lathe.

#### TURRET LATHES & SCREW MACHINES.

No. 3 Pratt & W., fr. b. g., 14 h. s.	24" W. & S. Monitor turret lathe.
1" Cleveland automatic.	15"x 6' American b. g. Fox lathe.
No. 2 Pratt & W. plain turret lathe.	16"x 6' Lodge & B. b. g. Fox lathe.
18" Warner & Swasey turret lathe.	No. 00 B. & S. auto. screw mchs., (2).

#### SHAPERS.

16" Walcott & Wood, triple gd., new.	24" Hendy, triple geared.
16" Barker, back geared crank, new.	26" Lodge & Davis, triple geared.
20" Walcott & Wood, high speed back geared crank.	28" Steptoe, triple geared.

#### DRILLS.

No. 1 Prentice Bros. radial. 4' arm.	34" W. F. & J. Barnes, sliding head.
13" Dwight Slate 4-spd., sensi., (2).	36" Baker Bros., complete.
Prentice 4-spindle sensitive.	Gardam, multiple spindle.
Nos. 2 & 4 Garvin, 3 & 4 spd., gang.	Footo-Burt, multiple spindle.
21" Hoefler 6-spindle, complete.	No. 1 Burke, bench, with Jacobs ck.
22" Lodge & Davis, sliding head.	

#### PLANERS.

16"x 16"x 24" Belden, 1 head.	30"x 30"x 8' Pease, 1 head.
17"x 17"x 18" Whitcomb, crank.	48"x 48"x 20' Belmar, 4 heads.
26"x 24" 6' L. W. Pond.	60"x 60"x 18' Pond, 3 heads.

#### MILLING MACHINES.

No. 12 Garvin, plain, (3).	No. 3 Kempsmith, plain.
No. 13 Garvin, plain, (2).	No. 3 Becker, vertical.
No. 2 Pratt & Whitney, plain.	No. 2 Hendy Norton, universal.

#### NUT TAPPERS AND BOLT CUTTERS.

8" Acme 6-spindle nut tapper.	2" Acme 3-spindle bolt cutter.
14" Acme 6-spindle nut tapper.	3" Reliance bolt cutter.

#### PRESSES.

No. 1 Cady punch press.	No. 3 P. G. Ferracute, geared.
No. 52 Bliss, straight side, plain.	No. 4 American Can, plain, o. b. i.
No. 71 Bliss, straight side, plain.	No. 7 Niagara, plain, o. b. i.
No. 41 Toledo plain power press.	

#### GRINDERS.

No. 1 Thompson univ., motor drive.	24"x 7' Springfield auto. oscillating surface grinder.
24" Leland, wet tool.	

#### MISCELLANEOUS.

Blower, No. 8 Sturtevant Monogram.	Grinder, tool post. 110 v. Hisey, d.c.
Boring bars, (9).	Hack saw, 6" Challenge.
Boring machine, vertical, American.	Hammer, steam. 500 lb. Bell.
Broaching mach., Waterbury-F.	Keyseater, No. 6 Morton, 4 cutters.
Chuck, 24" Westcott combination,	Keyseater, No. 24 Mitts & Merrill.
with 2 sets jaws, pract. new.	Keyseater, No. 2 Davis.
Exhauster, No. 3 Champion, new.	Magnet wind'g lathe, high-speed.
Exhausters, three 28", one 50".	Punch & shear comb., 4' Keene.
Floor crane, 1 1/2 ton Franklin.	Slotter, vertical, 12".
Gas engine, 3 h.p. Fairbanks-Morse.	Tapping mchs., No. 2 Garvin auto.
Grinders, lathe center, Gem. (6).	Welder, port. acetylene, Economy.

## SECOND-HAND MACHINERY

### FOR SALE BY

**W. L. Perkins Machinery Co.**

**30 Church St., New York**

#### LATHES.

12"x 5' Starr, c. r., hollow spld.  
16"x 8' Standard, c. r., hollow spld.  
18"x 7' Pond, compound rest.  
22"x 10' Harrington, compound rest.  
17"x 17"x 32" Miles.  
20"x 20"x 38" New Haven.

2"x 24" Jones & Lamson flat turret,  
set over head.  
30"x 18' Niles, compound rest.  
42"x 12' Harrington, triple geared.  
42" Niles car wheel lathe.

#### PLANERS AND SHAPERS.

36" Fellows gear shaper.  
28"x 16' New Haven, c. r., hol. spld.  
32"x 32"x 8' Pond, double head.

24" Gould & Eberhardt, b. g.  
12" Steptoe, crank.

### FOR SALE BY

**Frank Toomey, Inc.,**

**127 N. Third St., Philadelphia, Pa.**

#### LATHES.

56"x 30' Baker, blocked to 62 1/2".  
42"x 20' Pond.  
36"x 16' Niles.  
36"x 14' Pond.  
30"x 22' Bement-Miles.  
30"x 18' Bement-Miles.  
28"x 16' Fifield.  
27"x 21' Pratt & Whitney, taper att.  
27"x 21' McCabe double spindle  
lathe and chuck.  
26"x 17' Johnson, taper attachment.  
24"x 16' New Haven, taper attach.  
22"x 18' Harrington.  
22"x 15' Draper, taper attachment.  
22"x 12' Pond.

21"x 9' Lodge & Davis.  
20"x 8' Fay & Scott, universal, (2).  
18"x 10' Draper.  
18"x 8' Bradford.  
18"x 8' Reed.  
18"x 8' Blaisdell.  
17"x 6' Greaves & Klusman.  
16"x 12' American.  
16"x 8' Bradford.  
16"x 6' Flather.  
16"x 6' Porter.  
16"x 6' Fitchburg.  
12"x 6' Hendey-Norton, pan bed,  
and collets.  
6" Rivet lathe, all attachments.

#### PLANERS.

60"x 60"x 14' Pond, two heads.  
36"x 36"x 11' 6" Sellers, 2 heads.  
26" widened to 35"x 8' Hendey.  
33"x 33"x 12' Woodward & Powell.

30"x 30"x 8' Dietrich & H., open side.  
28"x 28"x 7' New Haven.  
22"x 22"x 6' Powell, two heads.  
12" Moore crank planer.

#### SHAPERS.

24"x 28" Gould & Eberhardt, bk. gd.  
24" back geared, Queen City.

12" Gould & Eberhardt.  
12" Bement.

#### RADIAL DRILLS AND DRILL PRESSES.

4' Hilles & Jones, radial.  
36" Bickford, radial.  
28" Superior, sliding head.

24" Barnes, sliding head.  
23" Barnes, stationary head.

#### MILLING MACHINES.

36"x 12' slab, heavy pattern.  
No. 3 Pedrick & Ayer universal,  
53" table.  
No. 3 Becker Brain'd pl., table 12x42.

No. 1 Brainard plain, table 12x48.  
No. 22 Garvin, vertical.  
No. 1 Van Norman duplex, table 2x9.  
Pratt & Whitney plain, table 55x5.

#### MISCELLANEOUS.

Bolt cutter, 14" National.  
Boring mill, vert., 36" Bridgeport.  
Boring mill, horiz., 48" Bement.  
Broaching mach., No. 2 LaPointe.  
Grinder, universal, No. 2 Brown &  
Sharpe.  
Grinding planer, 22"x 22"x 5' Spring-  
field.  
Hammer, steam, single frame, 400-  
lb., Chambersburg.  
Hammer, board drop, 500 lb., Pratt  
& Whitney.  
Pipe machine, 8" Saunders.  
Dynamos, motors, engines and boilers,  
and second-hand. Send for our stock

Internal grinding lathe, 16"x 5'  
Diamond.  
Pipe machines, 3" and 6" Curtis &  
Curtis, hand power, (2).  
Pulley boring machine, 60" Har-  
rington, upright.  
Punch and shear, double end, No. 2  
Koyersford.  
Punch and shear, dbl. end, Sellers,  
30" throat, 14" cap., wt. 35,000 lbs.  
Shear, single end, 50" throat, 2"  
capacity, engine driven.  
Turret lathe, No. 6 Brown & S.  
Wood-working machines both new  
books.

## SECOND-HAND MACHINERY

### FOR SALE BY

**Hill, Clarke & Co. of Chicago,**

**127 N. Canal St., Chicago, Ill.**

Our only guarantee on a second-hand machine is: Return it within one month, freight prepaid, and we will refund purchase price in full.

#### LATHES.

7" American bench.  
10" x 5' Pratt & Whitney, tool room.  
11" x 4' Mann.  
12" x 6' Starr.  
13" x 6' Blaisdell.  
14" x 6' Blaisdell.  
14" x 6' Hendy.  
14" x 6' Flather, taper.  
15" x 6' Whitcomb Blaisdell.  
16" x 6' Springfield.

18" x 8' Whitcomb Blaisdell, gd. hd.  
18" x 8' American, geared head.  
20" x 10' and 22" x 12' Flather.  
24" x 14' Schumacher & Boye.  
26" x 16' Draper.  
28" x 11' Blaisdell.  
32" x 14' New Haven.  
36" x 12' Fifield.  
60" x 16' Fitchburg.  
And many others.

#### TURRET AND SCREW MACHINES.

No. 00 Brown & Sharpe automatic.  
No. 0 Brown & Sharpe full auto.  
6" Pratt & Whitney.  
4" Pearson.

2" Bardons & Oliver.  
No. 5A Potter & Johnson.  
2" x 24" and 3" x 36" Jones & Lamson.  
4" Cleveland automatic.

#### DRILLING AND BORING MACHINES.

10" Barnes, bench friction.  
12" two spindle Barr sensitive.  
13" & 14" 3-spd. sensitive.  
14" Dwight Slate, 4 spd. sensitive.  
20" Foote-Burt.  
22" Barnes, stationary head.  
24" Cincinnati.  
26" Hoefer, sliding head.  
28" Lodge & Davis.

36" Prentice.  
24" Simplex Drees radial.  
4" Universal and Gang.  
5" Putnam.  
64" Baush.  
No. 2 Western multiple spindle.  
32" Niles vertical boring mill.  
Blinse horizontal boring.  
No. 3 Universal horizontal boring.

#### SHAPERS AND PLANERS.

15" Hendy, triple geared.  
16" Garvin, crank.  
20" Hendy.  
20" Ohio, geared.  
22" Ohio, crank.  
22" Ohio, triple geared.  
22" x 22" x 5' Powell.  
24" Pedrick & Ayer, open side.

24" x 24" x 8' Cincinnati.  
24" x 24" x 6' Pond.  
28" x 28" x 6' Gray.  
30" x 30" x 6' Pease.  
36" x 36" x 14' Cincinnati, 2 heads.  
40" x 40" x 12' New Haven, 2 heads.  
48" x 48" x 13' Cincinnati, 2 heads.

#### GRINDERS.

Davis & Egan, cutter.  
Brown & Sharpe, universal cutter.  
Cincinnati, universal cutter.  
Wells Bros., univ. reamer and cutter.  
Yankee drill grinder.

Heald, twist drill.  
No. 200 Heald, piston.  
No. 24 Bath, universal.  
No. 3 Bath, universal.  
No. 16 Landis, plain.

#### MILLERS AND GEAR CUTTERS.

No. 1 and No. 2 Chicago, small.  
No. 2 Garvin, hand.  
No. 2 Aurora, plain.  
No. 12 Garvin, plain.  
No. 14 Brown & Sharpe, universal.  
No. 14 LeBlond, plain.  
Hendy, duplex.  
No. 1 Garvin, plain.

No. 12 Brown & Sharpe, plain.  
No. 26 Brainard, plain.  
No. 28 Oesterlein.  
No. 3 Becker Brainard, universal.  
No. 2 Kearney & Trecker, univ.  
No. 1 Pfauter gear hobber.  
30" Flather automatic gear cutter.  
36" Fellows gear shaper.

#### PUNCH PRESSES.

No. 10 Stiles, bench inclinable.  
No. 81 Consolidated, bench.  
No. 1 Bliss punch.  
No. 1 Faulkenau & Sinclair punch.

Nos. 1 and 3 Philadelphia.  
Nos. 31 and 32 Toledo punch.  
No. 1 Ferracut.  
No. 3 R. & K., open back inc.

#### MISCELLANEOUS.

Bulldozer, No. 2 Williams & White.  
Car brass borer, 2 spdl. Niles.  
Cold saw, No. 17 Higley.  
Cutting-off mch., 3" Hurlbut & R.  
Keyseater, 18" Morton.  
Keyseater, No. 1 Davis.

Oil separator, No. 2 American.  
Punch and shear, single end, No. 4 Sutton.  
Safety motor polishing stand.  
Slotter, 12" Niles.  
Tapper, No. 1 Garvin auto.

## SECOND-HAND MACHINERY

### FOR SALE BY

**Rumely-Wachs Machinery Co., 121 N. Jefferson St., Chicago, Ill.**

#### LATHES.

Jewelers' nickel plated bench lathe.  
9" Young, foot power.  
12"x 5' Davis.  
12"x 6' Prentiss.  
14"x 5' Bradford, plain rest.  
14"x 6' Bogert.  
14"x 7' Bogert.  
14"x 6' Pratt & Whitney.  
14"x 6' Flather, taper.  
15"x 5' Whitcomb-Blaisdell.  
15"x 6' Walcott.  
16"x 6' Bogert.  
16"x 6' Flather.  
16"x 6' Walcott.  
16"x 6' LeBlond.  
16"x 6' American, quick change.  
16"x 7' Springfield "Ideal."

18"x 8' Flather, plain rest.  
18"x 8' Flather, quick change.  
18"x 8' Walcott.  
18"x 8' LeBlond, turret on shear.  
19"x 11' Lodge & Davis, taper.  
20"x 10' LeBlond.  
20"x 9' Draper.  
22"x 10' Gleason.  
22"x 10' Fifeild.  
24"x 8' Putnam.  
24"x 12' New Haven.  
24"x 24' Fifeild.  
26"x 10' Enterprise.  
36"x 12' Schumacher & Boye.  
36"x 13' Fifeild.  
42"x 16' Fitchburg.

#### UPRIGHT DRILLS.

10" Barnes, friction.  
12" Rockford.  
20" Richards, w. and l.  
20" Rockford, w. and l.  
20" Barnes, w. and l.  
20" Barnes, w. and l. b. grd.  
24" Prentice Bros., sliding head.

26" Barnes, sliding head.  
30" Gould & Eberhardt, sliding hd.  
40" Lodge & Davis, sliding head.  
4-spl. Dwight Slate, sensitive.  
4-spl. Pratt & Whitney, sensitive.  
3 spindle Reed, sensitive.  
2 spindle Barr, sensitive.

#### SHAPERS.

12" Springfield.  
14"x 34" Sellers, traveling head.  
15" Hendey.

15" Walcott.  
16" Gould & Eberhardt.  
20" Walcott.

#### PLANERS.

20"x 20"x 4' New Haven.  
20"x 20"x 4' Putnam.  
22"x 22"x 5' Wheeler.  
22"x 22"x 5' Gray.

26"x 26"x 7' Niles.  
30"x 30"x 8' Putnam.  
36"x 35"x 15' Powell.

#### MILLING MACHINES.

No. 2 Fox hand miller.  
No. 34 Fox, hand and power.  
No. 1 Cincinnati, plain.  
No. 1 Brown & Sharpe, plain.  
No. 1 Brown & Sharpe, universal.  
No. 11 Brown & Sharpe, plain.

No. 4 Garvin, plain.  
No. 2 Kempsmith, plain.  
No. 2 Kempsmith, universal.  
No. 3 Kempsmith, plain.  
No. 3 Newton, plain.

#### PUNCH PRESSES AND SHEARS.

No. 18 Bliss, o. b. i., bench.  
No. 2 Consolidated, o. b. i.  
No. 24 Consolidated, o. b. i.  
No. 1 Bliss, solid back.  
No. 2 American Can, solid back.  
No. 3 Crosby, solid back.  
No. 2 Billings & Spencer trimming press.

Merriam trimming press.  
Drombacher hand lever splitting shear.  
New Doty No. 4-O hand shear.  
No. 4 W. & W. hand punch.  
30" Niagara heavy foot power squaring shear.  
22" Toledo power squaring shear.

#### BORING MILLS.

Niles horizontal, 24" bar.  
42" Bridgeport, turret head.

42" Bullard, two swivel heads.

#### TURRET LATHES AND SCREW MACHINES.

No. 0 Brown & Sharpe, wire feed.  
No. 1 Pratt & Whitney, wire feed.  
No. 2 Pratt & Whitney, wire feed.  
18"x 6' American, square arbor, Fox.

18"x 6' American Fox monitor.  
18"x 6' Lodge & Davis.  
21" Gisholt.  
24" American.

#### GRINDERS.

No. 1 B. & S. surface grinder.  
No. 1 LeBlond, universal cutter & reamer.

No. 2 Landis, universal.  
No. 20 Landis, plain.



## SECOND-HAND MACHINERY

### Rumeley-Wachs Machinery Co.—Continued.

#### MISCELLANEOUS.

Cornice brake, 8' Dreis & Krump.  
Cutting-off machine, 4½" Pratt & Whitney.  
Filing machine, Simplex.

Filing machine, bench.  
Gear cutter, Dwight Slate auto.  
Pipe machine, 4" Bignall & Keeler.  
Pipe machine, 6" Saunders.

#### FOR SALE BY

Bertsch & Co.,

Cambridge City, Indiana

#### HEAVY TRANSFER WAGON.

One extra heavy Transfer Wagon, 5" steel spindle, 8" tires, platform 6'x14'; capacity, 35 tons.

#### FOR SALE BY

McCoy & Brandt,

410 House Building, Pittsburg, Pa.

#### SHAPERS, LATHES, MILLING MACHINES & DRILL PRESSES.

10"x18" foot power lathe, h. s.  
16"x 7" Pond.  
16"x 5' Blaisdell screw cutting, taper attachment.  
18"x 8' Blaisdell screw cutting, 1½" hollow spindle, compound rest.  
18"x 9' New Haven, steady rest.  
18"x10' Prentiss facing or recessing, hollow spindle.  
24"x14' New Haven, cp. rest.  
20" Streit pulley turning lathe.  
No. 6 Bliss spinning lathe.  
22" Prybil spinning lathes, (2).  
No. 4 Jones & Lamson turret lathe.  
12"x 5' Blount speed lathe, 6 tool tur.

17" P. & W. turret, 1½" h. s.  
No. 2 Warner & Swasey, 1½" h. s.  
18"x18"x4' Ingersoll hor. slab miller.  
52"x46"x 8' Niles vertical, double spindle miller.  
4' Drees radial drill.  
36" Drees plain radial.  
42" Universal plain radial.  
24" arm Dallett portable radial  
3 spindle Gardam sensitive.  
15' Cleveland wall radial.  
18" Lodge & Davis crank shaper.  
18" Hendy shaper.  
20" P. & W. crank shaper.  
10" Putnam, traverse head.

#### PLANERS, PUNCHES, PRESSES AND HAMMERS.

42"x42"x15' New Haven planer.  
54"x48"x10' Woodward & Powell.  
30"x30"x10' Woodward & Powell, spur geared.  
No. 23 Toledo cam drawing press.  
No. 54 Toledo geared drawing press, 12" stroke.  
No. 54 Toledo geared drawing press, 14" stroke.  
No. 956 Waterbury-Farrel, 7" stroke.  
No. 6 Waterbury-Farrel, open back, 2" stroke.  
No. 2 Leffler horning and wiring press, 2" stroke.  
No. 12 Baxendale horning and wiring press, 2½" stroke.  
72"x60"x24' Gray spiral gd. planer.  
38"x38"x20' Gleason pl'r, ext. to 52".  
24"x32"x6' New Haven planer.  
56" Gray planer.  
36"x36"x10' Ohio.

No. 3½ special Bliss press.  
No. P-2 Ferracute press.  
56"x56"x16' Gray planer.  
96"x96"x16' Powell.  
20" Lambertville punch.  
36" Cleveland extra heavy punch.  
12" Hilles & Jones punch.  
Fisher gap shear, 21" throat.  
No. 12 W-W shear.  
Hilles & Jones double angle shear, 6"x6"x½" cap.  
Garrison Foundry Co. gate shear, 10'6" cap.  
No. 105 Bliss circle and splitting.  
No. 60 Waterbury-Farrel, geared.  
No. 3½ Bliss cam press.  
No. 3 Bliss press.  
36"x36" Bliss cornice makers' drop press.  
25 ton Bliss toggle press.  
60 lb. Bradley helve hammer.

#### MISCELLANEOUS.

Air compressors, 24"x26"x30" Ingersoll-Rand, Class A. (6)  
Air compressor, 18"x18"x24" Ingersoll-Rand, Class A.  
Air compressor, 18"x20"x24" Ingersoll-Rand, Class A.  
Bulldozer, No. 5 Ajax Mfg. Co.  
Cold saw, Espen Lucas, 2 saws, 15" cap.  
Nailing machine, No. 18 Morgan, 36".

## SECOND-HAND MACHINERY

### FOR SALE BY

**Brown & Zortman Machinery Co., 2535 Liberty Ave., Pittsburg, Pa.**

#### LATHES.

2x24 in. Jones & Lamson. 21 in.x8 ft. New Haven.  
18 in. American Tool & Machine 60 in.x18 ft. New Haven, with 14 ft.  
brass lathes, (2). extension, triple geared.

#### PLANERS AND SHAPERS.

30x30x12 Sellers planer. 24 in. Juengst shapers, (2).  
42x42x18 Betts planer. 26 in. Kelly shaper.  
84x84x14 Niles planer, 3 heads. 28 in. Juengst shaper.  
26x26x6 Lodge & Davis planer. 30 in. Morton draw cut shaper.  
28 in. Cincinnati back geared shaper.

#### RADIAL DRILLS.

No. 1 Bickford, plain. 20 in. Mueller, plain.

#### MISCELLANEOUS.

Grinder, universal, No. 2 Diamond. Pulley boring machine, 50 in. Niles.  
Grinder, universal, No. 2 Landis.

### FOR SALE BY

**The Osborne & Sexton Machinery Co., Columbus, Ohio.**

#### LATHES.

16x 6 Reed, hollow spindle. 20x12 Hamilton, h. s., c. r., taper.  
16x16 Mueller, hollow spindle. 22x16 Lodge & Davis, hol. spdl.  
19x12 Lodge & Davis, h. s., c. r. 48x19 Gleason, 36 in. raised.

#### PLANERS AND SHAPERS.

14 in. Hendy. 24x24x6 Gray.  
14 in. Steptoe. 48x48x20 Belmar, 4 heads.  
16 in. Gould & Eberhardt. 72x72x19 Betts, 4 heads.

#### MISCELLANEOUS.

Boring mill, 50 in. Niles. Miller, plain, Grand Rapids No. 1.  
Boring mill, Niles, 14-36 ft. exten. Punch press, No. 12 Etna, inc.  
Drills, 22 and 24 in. Barnard, complete. Punch and shear, 18 in., hvy. pat.  
Gas engines, 10, 15, 25, 40 & 60 h. p. Radial drill, 5 ft. Niles, plain.  
Gas furnaces, Chicago. (2). Rolls, Toledo shovel blanking.  
Hammers, drop, 300, 750 and 3,000 lbs. Threading mches., Webster & P., (2).  
Hammers, helve, Schatz & Dayton. Wheel press, 100 ton, Niles.

### FOR SALE BY

**The Randle Machinery Co., 1739 Powers St., Cincinnati, O.**

#### ENGINE LATHES.

18 in.x8 ft. McFarlan.  
16 in.x8 ft. Steptoe.  
17 in.x12 ft. Greaves-Klusman.  
Lathes complete with face plates,  
chuck, countershafts and all parts.

#### PLANERS.

36x36x8 ft. Oesterlein, with coun-  
tershaft and all tools.

1 special planer 47 in. between hous-  
ings, table 11 1/2 ft. long.

#### GAS & GASOLINE ENGINES.

25 h. p. Dean.

8 h. p. Springfield.

#### MOTORS.

All sizes and kinds.

#### BOILERS.

Horiz. tubular, from 36 to 150 h.p.  
Fire box, from 8 to 80 h. p.  
Vertical, from 3 to 50 h. p.

#### ENGINES.

Corliss, from 50 to 500 h. p.  
Automatic, from 15 to 200 h. p.  
Throttling, from 5 to 225 h. p.

#### ELECTRIC GENERATORS

120 k. w., belted.  
25 k. w., Keystone belted.  
20 k. w., direct connected with en-  
gine.  
18 k. w., belted.  
10 k. w., Fairbanks-Morse belted.  
25 amp., Roth belted.

#### MISCELLANEOUS.

Heaters, tanks, pumps, electrical, saw mill and general machinery, including  
a complete line of Iron Working Tools. Write for list.

Also a full assortment of new machinery.

Sole manufacturers of the celebrated "Leader" Injectors and Jet Pumps.

## SECOND-HAND MACHINERY

### FOR SALE BY

**E. G. Eldridge Machinery Co., 29-31 N. Jefferson St., Chicago, Ill.**

High Quality and Low Prices on the following—satisfaction guaranteed.

#### DRILL PRESSES.

Perry bench drill,  $\frac{3}{4}$ " drilling capacity.

10" Stecher b. b., h. s. bench drill, capacity  $\frac{3}{4}$ ".

13" Cincinnati single spindle sensitive drill and c. s.

4 spindle Woodward & Rogers sensitive gang, second hand.

20" Milwaukee plain sensitive feed drill.

20" Milwaukee wheel and lever feed drill.

20" Milwaukee wheel and lever and back geared drill.

20" Rockwell, back gear, power feed and automatic stop.

24" Milwaukee, sliding head, back gear, power feed and automatic stop.

#### ENGINE LATHES.

9"x24" center to center Rockford Drilling Machine Co., b. g., with semi-compound rest, complete, new.

11"x 5" Rockford, comp. rest, power cross feed, dbl. fr. c. s., new.

13"x22"x54" Barnes sliding extension gap lathe, new, complete.

14"x 6" Monarch, 4 step cone, single back gear, new.

14"x 8" Monarch, 4 step cone, single back gear, new.

14"x 8" Flathead b. g., with hollow spdl., comp. rest, all the change gears, 9" 4-jaw independent chuck fitted, second hand, over-hauled, in fine order.

16"x 8" Monarch, 4 step cone, single back gear, new.

16"x 8" Rahn-Larmon, quick change gear, 5 step cone, s. b. g., new.

18"x10" Monarch, 5 step cone, single back gear, new.

22"x10" Rahn-Larmon, 5 step cone, single back gear, new.

#### MILLING MACHINES.

No. 2 P. & W., b. g., Lincoln type, second hand.

No. 14 Rockford, b. g. plain, new.

No. 0 Owen, back gear plain, new.

No. 2 Owen, b. g. plain, new.

No. 14 Owen, univ., all p. fds., new.

No. 2 Owen, univ., all p. fds., new.

No. 3 Owen, d. b. g., all p. fds., new.

No. 34 P. & W. horiz., b. g., power

fd., 4' long, platen 6'8" long, sec.

hd., fine order.

All sorts of attachments and small tool equipments.

#### PLANERS.

24"x24"x6" Pease, heavy pattern, 1 head, second hand.

22"x22"x5" Pond, 1 hd., second hand.

#### PUNCH PRESSES.

Nos. 1, 2 & 3 Rockford, o. b. i., new.

No. 1 K. & K., o. b. i. standard, (2).

No. 3 R. & K., dbl. action, o. b. i.

each with dial feed, (3).

No. 3 Hoept, o. b. i., sec. hd.

No. 1 R. & K. ditto.

No. 18 Bliss, o. b. i., with cam operating horiz. slide, second hand.

No. 63 Consolidated, st. side, with steel tie rods and knock-out.

Quick acting hand screw presses, wt. about 500 lbs. each, sec. hd., (2).

#### SHAPERS.

16" Rockford, s. g. crank, new.

16" Rockford, b. g. crank, new.

#### SCREW MACHINES.

No. 1 Brown & Sharpe semi-automatic, second hand.

No. 2 Bardons & Oliver, 1" wire feed capacity, new.

No. 2 Garvin, 1 $\frac{1}{2}$ " w. f. capacity hd. screw mach., second hand.

15"x6" Dreeses g. f. h. univ. Fox Monitor, second hand.

#### MISCELLANEOUS.

Cold saw, Higley, 14" blade, second hand.

Fans, No. 3 Buffalo, 7" outlet, nearly new, (2).

Gas furnace, American.

Grinder, plain surface, La Salle, with micrometer feed, new.

Metal melter, Walker non-oxydizing, cap. 11" diam., second hand.

Motors, 10 h.p. ditto., 800 r.p.m., 230 v., d.c., with switches and starting boxes, (3).

Polishing lathes, heavy, second hand, (2).

Rivet spinning machines, Grant, all sizes.

Safe, combination lock, about 6' high, 5' wide and 3' deep, weight approximately 7,000 lbs., second hand.

Wire straightener and cutting-off machine, 3-16" Adt. Shuster, 4' length and shorter, new.

Many other machines and small tools, new and second hand. Write for new list just out. Will buy your machinery or entire plant.

## SECOND-HAND MACHINERY

### FOR SALE BY

**F. P. Schlelein Mchy. Co., 114-116 W. Park Way, N. S., Pittsburgh, Pa.**

Buffing stand, double end, column type.  
Chain hoist, 1 ton, round.  
Drill, portable, No. 4 Dallett.  
Engine lathe, 14"x6" Monarch.  
Exhaust fan, No. 9 Champion, 16" inlet and outlet.  
Generator, 75 light, 110 volts, with switchboard.  
Grindstone frame, iron, stone 28x3".  
Motor, 2 h. p. Lundell, 500 v., d. c.  
Planer, pony, 24x6" J. A. Fay.

Planer, 36"x36"x10' Ohio.  
Pressure blower, No. 1 Champion, with attached countershaft.  
Pressure blower, No. 4 Buffalo, 5" outlet.  
Radial drill, plain, 4 1/2" Baush.  
Screw press, No. 3 Young & Wheeler, hand power.  
Shaper, 6"x9" Boynton & Plummer.  
Steam hammer, 600 lb. Pittsburg, double frame.  
Wire cutter, 3" Shuster, hand power.

### FOR SALE BY

**Bertsch & Co.,**

**Cambridge City, Ind.**

Used Tools for Sale or Trade.

Drill press, 18".  
Drill, universal, 56" Bickford, No. 4 spindle.  
Grinder, wet knife, 4' Diamond, 18"x20" wheel.  
Lathe, 16"x8" Pond.  
Lathe, 18"x8" Conway.  
Lathe, 40"x30", double geared.  
Nut tapper, 4 spindle.  
Planer, 30"x30"x7' G. & E., 1 head.  
These tools can be seen in operation in our shops. We will trade them for any of the following used or new tools:  
Boring m.l. 5' to 6' vertical.  
Boring, milling and drilling machine, heavy floor type.  
Radial drill, 4' to 6", No. 5 spindle.  
Shaper, heavy traverse, 10' to 16".

Planer, 50"x42"x13" Pond, 2 heads.  
Pulley lathe, 30"x40" Schellenbach.  
Pulley lathe, 42"x56" Schellenbach.  
Pulley lathe, 56"x51" Putnam.  
Radial drill, 48" Bickford, No. 4 spindle.  
Radial drill, 50" Gang, No. 4 spdl.  
Shaft straightener, 25".  
Shaper, light traverse, 15" stroke x10" longitudinal travel of hd., 1 hd.

### FOR SALE BY

**Brown-McDonald Machinery Co.,**

**906-908-910 North Market Street, St. Louis, Mo.**

#### BLOWERS.

14 Blowers, all sizes, including 2 No. 7 Roots rotary.

#### COMPRESSORS.

6x6 Laidlaw-Dunn-G., horiz., steam. 10x11x12 Franklin, horiz., steam.

#### DRILLS.

21 in. Mechanics, w. & l., sq. b., new. No. 34 Reed, 4 spindle sensitive.  
No. 33 Reed, 3 spindle sensitive. 20 in. Aurora, square base, p. l.

#### GRINDERS.

10 Emery grinders, all sizes.

#### LATHES.

5 speed lathes. 15x 6 Rockford, c. r., hol. spdl., new.  
14x 6 Flather. 17x 8 Fifield.

#### MILLING MACHINES.

No. 10 Kempsmith, plain. Cincinnati, slab milling & boring.

#### PIPE MACHINES.

3 in. Curtis & Curtis, power. 2 1/2 in. power.

#### PUNCH & SHEAR.

No. 6 Long & Allstatter, cap. 1/2 in. 1/2, alligator pattern.

#### SHAPERS.

12 in. Hendey. 16 in. Steptoe.

#### SHEARS.

30 in. Acme, foot-power, square. 37 in. Acme, foot power.

#### MISCELLANEOUS.

Boring mill, 54 in. Powell. Gear cutter, Brainard.  
Large stock of Engines, Boilers, Wood Working Machinery, Pulleys, Shafting, Belting, etc. Can fill all requirements. Write us.

## SECOND-HAND MACHINERY

### FOR SALE BY

**Prentiss Tool & Supply Co., New York, Boston, Buffalo, Syracuse**

#### BORING MILLS.

24" bar Bement, horizontal.  
2 spindle Foote-Burt, cylinder.  
5" bar Beaman & Smith, horizontal.

#### DRILLS.

42" Gang, plain radial.  
36", 48" and 60" Bickford pl. radials.  
21" and 30" Snyder sliding head.  
3-spindle 20" Barnes, gang.

#### GRINDERS.

Pratt & Whitney, vertical surface.  
Walker automatic, surface.  
No. 11 Landis, plain.

#### MILLERS.

Nos. 1, 2 & 3 Cincinnati, universal.  
No. 518 Becker, horizontal.  
No. 9 Kempsmith, plain.

#### LATHES.

12"x 4' Hendey, r. & f.  
14"x 5' Hendey, c. r.  
16"x 6' Reed, c. r., p. c. f.  
16"x 8' Hendey, c. r., p. c. f.  
16"x 8' Prentice, c. r., p. c. f.  
16"x10' Hendey, c. r., p. c. f.  
18"x 8' Lodge & Shipley, pat. hd.  
18"x 8' Reed, c. r., p. c. f.  
18"x14' Flather, c. r., p. c. f., taper.  
20"x10' Draper, c. r., p. c. f.  
22"x10' Bullard, c. r., p. c. f.  
24"x12 Putnam, c. r., p. c. f.  
26"x18' Pond, c. r., p. c. f.  
27"x12' Pratt & Whitney, c. r., p. c. f.

#### PLANERS.

15"x15"x 3' Pratt & Whitney.  
24"x24"x 6' Whitcomb.  
26"x26"x 6' Wheeler, 1 head.  
30"x30"x 8' Powell, 1 head.  
30"x30"x10' Whitcomb, second belt drive.

#### HAMMERS.

25 lb. Dupont, trip.  
50 lb. Bradley, trip.

#### PRESSES.

No. 744 Bliss, geared.  
No. 2 Stiles, punching type.

#### SCREW MACHINES.

2"x24" Jones & Lamson.  
12"x18" and 3"x36" Pratt & Whitney.  
No. 4 Garvin wire feed, f. b. g.  
3" Warner & Swasey, wire feed.  
No. 6 Warner & Swasey, wire feed.  
No. 6 Brown & Sharpe.

#### SHAPERS.

14" Lodge & Davis, crank.  
15" Potter & Johnston, crank.

#### MISCELLANEOUS.

Automatic pinion cutter, Slate.  
Bending rolls, 8", 4" cap.  
Cold saw, 9" Espen Lucas.  
Dynamometer, 40 h. p. Sprague.  
Gear cutter, 24" G. & E.  
Keyseaters, Nos. 2 and 3 Giant.  
Pipe machine, 3" Jarecki.

3" Lucas, horizontal.  
51" Bement-Miles, vertical.  
42" Rogers, vertical, two heads.

Style F Baker Bros., heavy.  
7-spindle Slate, gang.  
2-spindle Foote-Burt, sensitive.  
6 and 10-spindle Gardam, multiple.

No. 1 Cincinnati, universal.  
10"x30" Landis, universal.  
No. 6 Rivett, internal.

No. 7 Becker, Lincoln.  
No. 12 Brown & Sharpe, plain.  
8' Beaman & Smith, planer type.

25"x12' Putnam, c. r., p. c. f., taper.  
30"x16' Fay & Scott, c. r., p. c. f.  
32"x12' Johnson, c. r., p. c. f.  
38"x20' Fay & Scott, c. r., p. c. f.  
40"x18' Newark, c. r., p. c. f.  
84"x20' Fitchburg, triple geared.  
16-32"x8' Fay & Scott, gap.  
20-42"x12' Fay & Scott, gap.  
32"x18' column facing lathe.  
16"x10' automatic threading.  
60" Stevens, pulley.  
11"x 4' Wells, speed.  
14"x 5' American, Fox.

36"x36"x12' Lodge & Davis.  
48"x48"x14' Sellers.  
52"x42"x12' Cincinnati.  
60"x60"x15' Sellers.  
66"x66"x12' Bement, 2 heads.  
71"x69"x14' Pond.

40 lb., helve.  
1000 lb. Pratt & Whitney, drop.

Nos. 1 & 2 Hibbard, inclinable.  
No. 23 Perkins, double acting.

24" American, heavy.  
22" Bullard, heavy.  
24" Gridley, 1-spindle.  
1" and 1 1/2" Hartford.  
1" Pratt & Whitney, autc.  
1" Brown & Sharpe, auto.

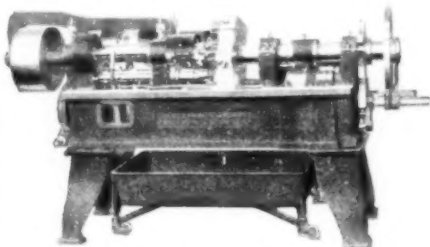
15" Ohio, crank.  
20" Kelley, crank.

Plate planer, 19".  
Punch and shear, double end, 7' throat, Bremer.  
Slotter, 10" Putnam.  
Slotter, 15" Dill.  
Tumbler, 30"x24" Smith.

## **An Operator on a "New Britain" Automatic**

**Saves his concern from two  
to four times his own wages**

This applies to our single head machine, for machining one end of castings, forgings and second operation rod work, and is compared with the three to five times greater cost of production on the hand turret lathe. By taking care of two Automatics, he saves from four to eight times his own wages; and with our double head type machines this can be multiplied by two again.



**Single Head Type**

"New Britain" Automatics are chucking machines, made in several sizes, with four to eight spindles, single or double head. They drill, face, tap, thread, etc., at one chucking, in the time of the longest angle operation.

Every movement is automatic, excepting the mere matter of loading and unloading, and that is done while the machine is in operation—provided for by an extra chucking section.

*Write for handsome catalog, and send sample  
for production estimate on your own work.*

**The New Britain Machine Co.**  
60 Chestnut St., New Britain, Conn.

